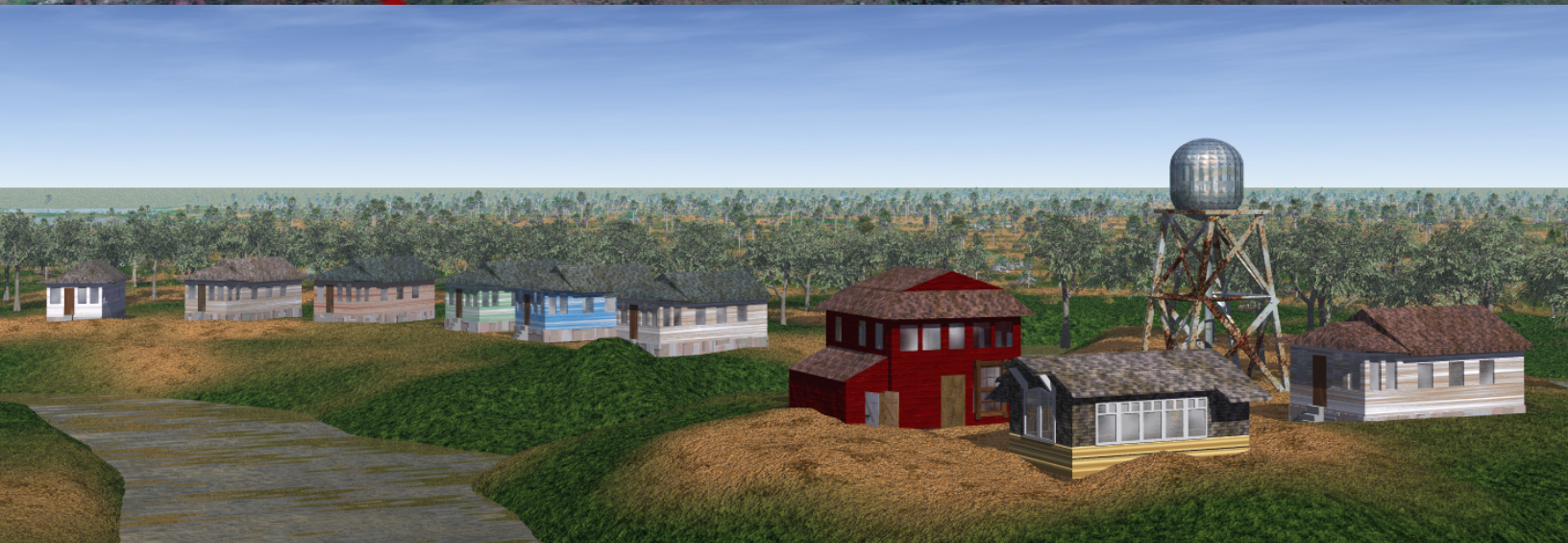


**South Florida Water Management District  
Land Stewardship Division**

3301 Gun Club Road, MSC 7320  
West Palm Beach, Florida 33416

**KICCO and Blanket Bay  
Management Area  
(Kissimmee River Pool A)  
Five-Year  
General Management Plan  
(2006-2011)**

**June 2006**



# KICCO and Blanket Bay Management Areas Kissimmee River Pool A Five-Year General Management Plan (2006- – 2011)

June 2006

Land Stewardship Division  
South Florida Water Management District  
3301 Gun Club Road  
West Palm Beach, Florida 33416-4680

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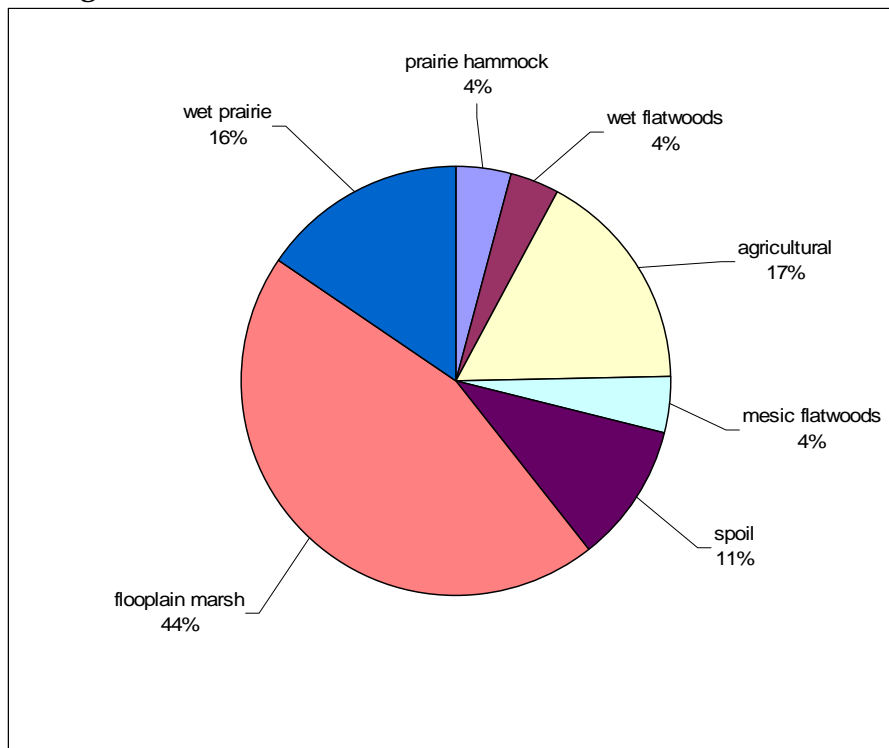
## 1. Executive Summary

The South Florida Water Management District (District) is mandated to acquire and manage lands which are vital to the restoration of the Everglades, the Kissimmee River, the Kissimmee Chain of Lakes and its headwaters. In the 1980's the District targeted the floodplain of the Kissimmee River as a Save Our Rivers (SOR) project. This plan addresses management for the 12,045 acres that have been acquired by the District within the project area known as Kissimmee River Pool A which includes the KICCO and Blanket Bay Management Areas (MA).

This General Land Management Plan describes the historical, ecological, and managerial aspects of the area as a means to coordinate effective management programs. The plan guides the District land management personnel toward logical and consistent land management practices. It also informs the public of operational procedures and organizational structures within the District and of management activities and objectives for the MA.

### NATURAL SETTING

The natural character of Pool A is defined by 5 distinct soil categories as defined by the Natural Soil Landscape Positions soil classification system: flatwood soils, flats soils, sand depression soils, muck depression soils, and urban or man made lands. Living on these soils are eleven distinct plant communities within the management area; the most common of which have the following coverage:



### RESOURCE MANAGEMENT

Resource Management programs at KICCO consist of:

- Prescribed fire to mimick the natural fire frequency in the fire-dependent natural communities.
- Forestry and vegetation management such as shredding or mowing overgrown understories, or thinning pine communities where they are too dense.
- Wildlife management, including surveys, habitat management, and hunting programs.
- Exotic vegetation treatment.
- Monitoring the health of the natural communities and the impact of management practices on them.
- Restoring sites that had previously been altered by drainage and/or agriculture.

### RESTORATION PROJECTS

The District is using USDA NRCS grant funds to finance the restoration of the Packingham and Buttermilk slough systems in the northwestern portion of Pool A by degrading internal levees, plugging drainage ditches, building a perimeter levee, and installing a water control structure in the southeast corner.

### MONITORING

The District performs vegetative community monitoring. The District has installed 360 degree photomonitoring points including eight points with associated vegetation plots within the restoration area to monitor the response to hydrologic improvements. FWC and the Archbold Biologic Station monitor wildlife on the site including red-cockaded woodpeckers, turkeys, and bald eagles.

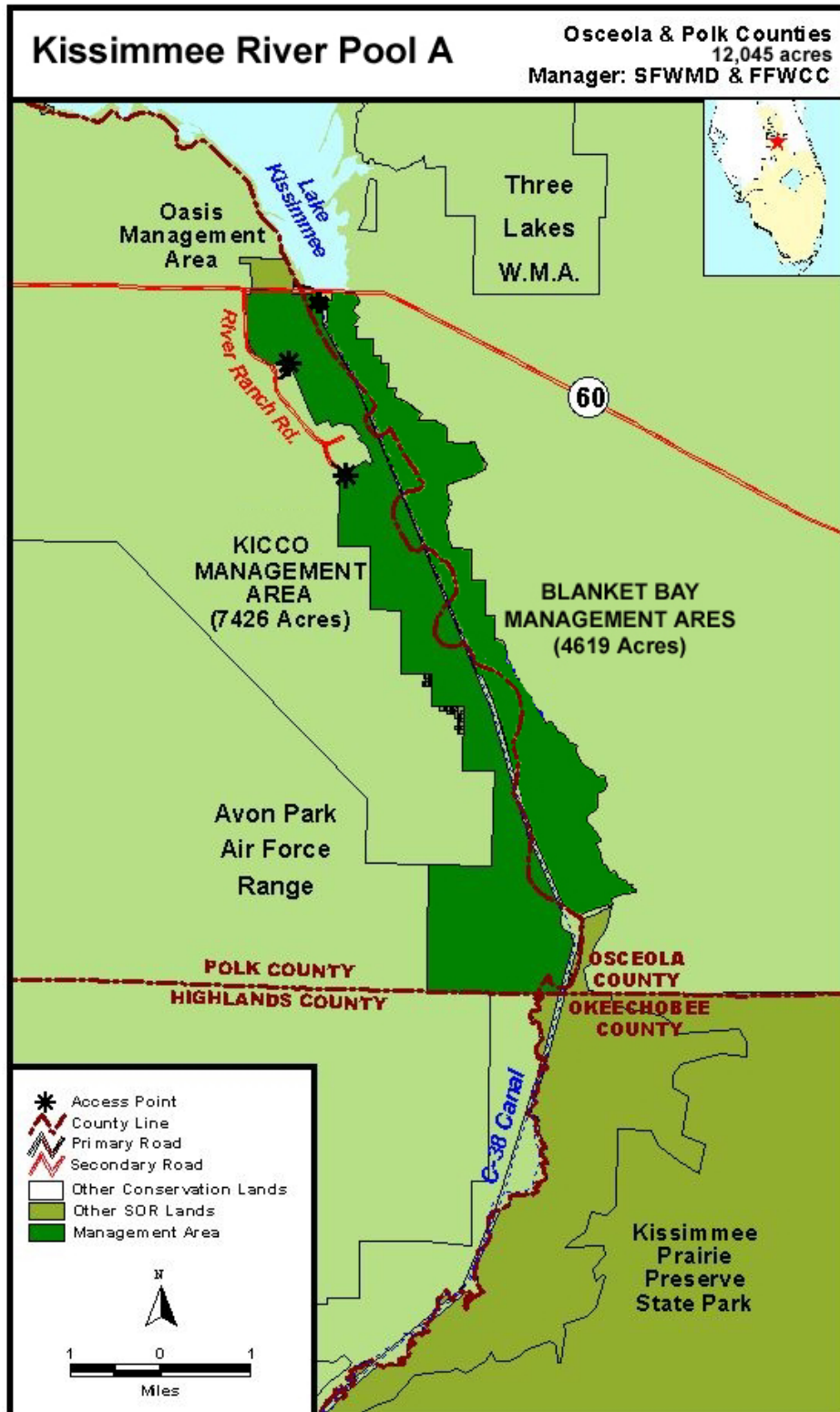
### WILDLIFE MANAGEMENT

Wildlife management including a hunting program are conducted by the Florida Fish and Wildlife Conservation Commission through two cooperative agreements with the District. The hunting program includes a general gun, muzzle loading, and archery season in the fall, small game hunts in late winter, and turkey hunting in early spring.

### PUBLIC USE

Several recreational activities are appropriate and encouraged in Pool A including boating, canoeing, bicycling, camping, equestrian, fishing, hiking, and hunting. There is a public boat ramp at the S-65 structure at SR 60. Blanket Bay is only accessible by boat from the channelized river. The Florida National Scenic Trail winds its way through the KICCO Management Area.

**Map 1. KICCO and Blanket Bay Management Areas**





## **2. Management Plan Purpose**

This General Management Plan (GMP) consolidates relevant information about the KiCCO and Blanket Bay Management Areas including land management goals and objectives, past and present land uses, resource data, restoration and management needs, public use programs, and administrative duties to guide management actions for the period 2006 to 2011. Management activities described in this plan are based on requirements and directives of Legislative statutes and established District policies. District policy 140-21 requires that general management plans be developed for each designated Save Our Rivers project.

District policy further states that the Land Stewardship Program's (LSP) mission is to provide natural resource protection and management while allowing compatible multiple uses on designated public lands. This mission statement and requirements set forth in Florida Statutes provide three primary goals for the LSP:

- Conserve and protect water resources
- Protect and/or restore land to its natural state and condition
- Provide appropriate public use

To accomplish these goals, the LSP performs six major functions:

- Strategic, project, and management planning
- Operation and maintenance of land resources
- Development of public use programs
- Development of restoration projects
- Evaluation of management activities
- Administration of land management service contracts

The plan consolidates current site information and general guidelines for management of the area. It also updates and replaces the Conceptual Management Plan developed by the Florida Fish and Wildlife Conservation Commission (FFWCC) in 1994 for the KICCO Wildlife Management Area. As such, it serves as a collective information source for management staff, partners, and the general public.

### **2.1 KICCO and Blanket Bay Management Area Goals and Objectives**

LSP functions are incorporated in specific MA goals and objectives for the period of this management plan 2006-2011:

**Goal 1: Manage natural communities and modified habitats to protect and enhance water, floral, and faunal resources.**

**Objectives:**

- Shred 100 acres annually to reduce overgrown saw palmettos.
- Continue the regular application of fire through a well-planned and documented prescribed burning program with a target of 1400 acres of flatwoods burned annually.
- Burn islands in the floodplain and shred and burn the overgrown marsh areas in Blanket Bay.
- Continue an aggressive, integrated exotic plant management program to eliminate and control infestations of all invasive exotic plant species. Treatments will be documented and coordinated with other management activities.
- Mow 60 acres of overgrown understory annually for turkey foraging areas.

**Goal 2: Provide resource-based public use opportunities.**

**Objectives:**

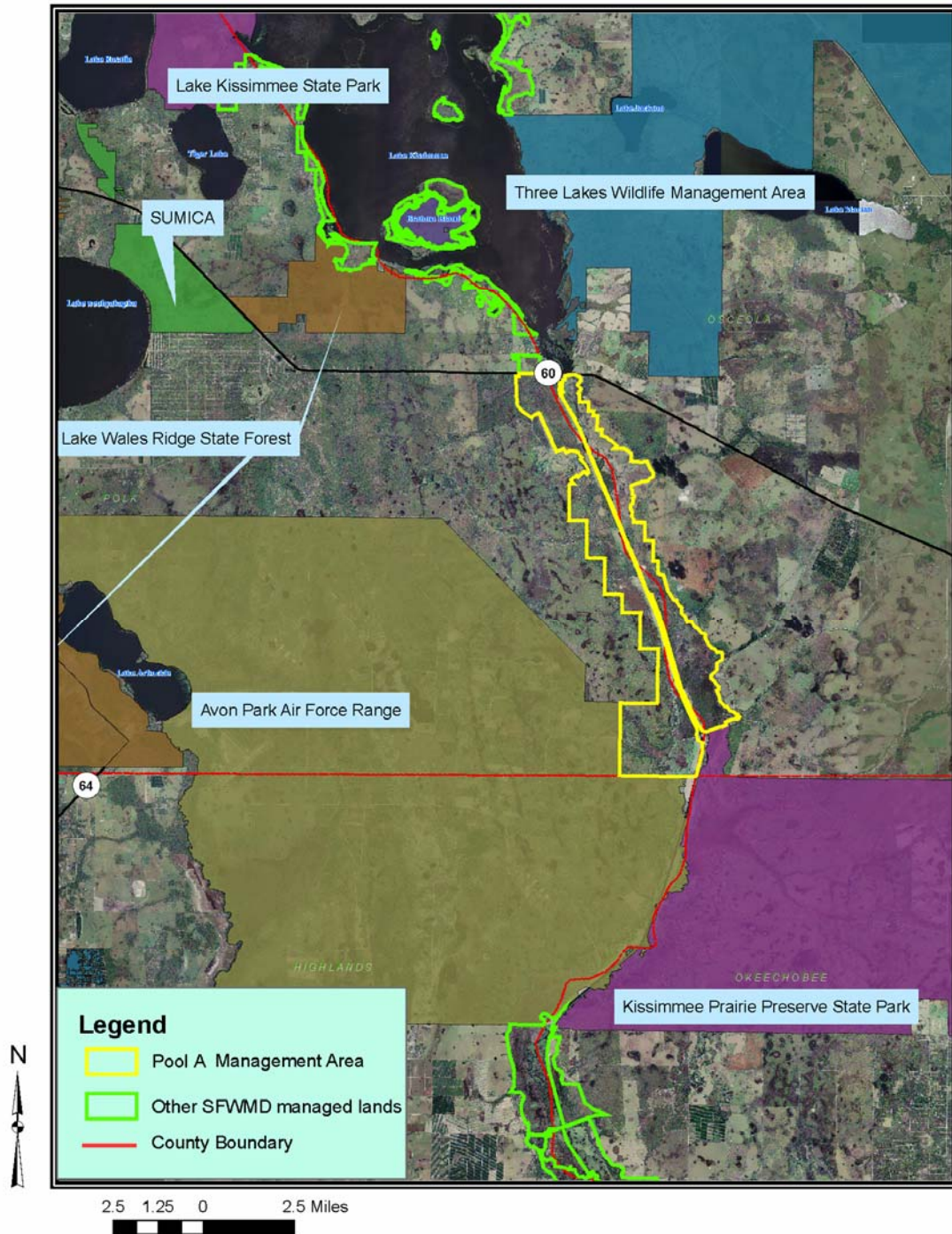
- Maintain present public-use improvements (roads, signs, entrances, structures) using a combination of District & FFWCC maintenance, construction contracts, and user group involvement.
- Install new kiosk in the southern and northern camping areas in KICCO.
- Develop and install interpretive signage at key points within the MA to enhance visitor experience and to educate visitors about the MA.
- Install two signs on the Florida National Scenic Trail on SR 60 and near the officer housing to inform visitors when the bombing range portion of the trail south of KICCO is closed for military operations.

**Goal 3: Implement hydrologic restoration projects within the altered floodplain**

**Objectives:**

- Complete the construction of the restoration components of Packingham and Buttermilk Slough Restoration project.
- Burn the Rattlesnake Marsh restoration project before the infestation of shrubby species becomes too pronounced.
- Design a restoration project for the Ice Cream Slough floodplain that functions similarly to the Packingham and Buttermilk project.

## MAP 2. Kissimmee River Pool A and other public lands



### **3. Introduction and Site History**

In 1981, the Florida Legislature established the Save Our Rivers (SOR) program for the five water management districts to acquire environmentally sensitive land. The legislation (373.59 F.S.) produced the Water Management Lands Trust Fund and empowered the water management districts to acquire lands needed to manage, protect, and conserve the state's water resources. Once acquired, the lands should be managed in an environmentally acceptable manner and restored to their natural state. Districts may make certain capital improvements, i.e. fencing, access roads/trails, and provide basic public facilities. The legislation also requires the districts to develop appropriate public use. In addition, habitat management such as control of exotic species and controlled burning may be conducted.

Historically, the Kissimmee River meandered within a one to two mile wide floodplain. The floodplain, approximately 56 miles long, sloped gradually to the south from an elevation of about 51 feet at Lake Kissimmee to about 15 feet at Lake Okeechobee; falling an average of about one-third of a foot in elevation over each mile of the river. Under historic conditions, river flows generally exceeded 250 cubic feet per second (cfs) 95 percent of the time, while overbank flooding occurred 35-50% of the time during the historic period of hydrologic record (1934-1960). The river moved very slowly, with normal river velocities averaging less than two feet per second.

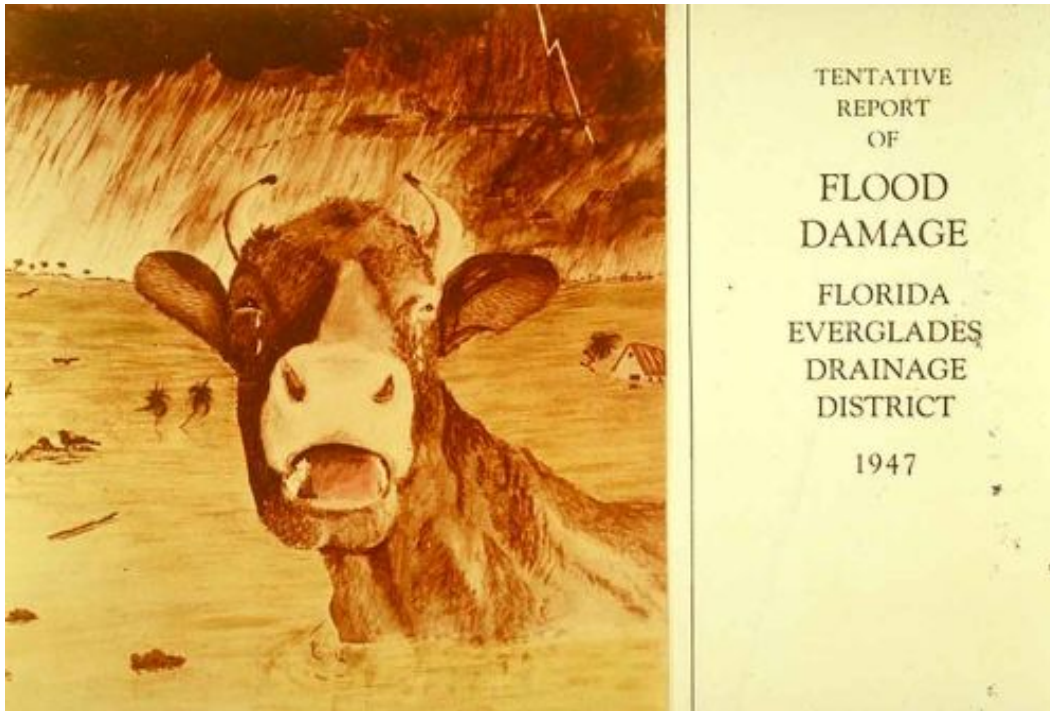
The historic floodplain was covered by approximately 35,000 acres of wetlands. The distribution and maintenance of plant communities within the floodplain wetlands depended on prolonged inundation and seasonally fluctuating water levels. A fluctuating hydroperiod, along with the undulating topography of the floodplain, a meandering river channel, oxbows, and natural discontinuous levees, enhanced and maintained habitat diversity, including the mosaic of intermixed vegetation types.

Prior to 1940, human habitation was sparse within the Kissimmee Basin. Land use within the basin consisted primarily of farming and cattle ranching. However, rapid growth and development following World War II set the stage for extensive property damage when a severe hurricane occurred within the basin in 1947. The mass flooding during this period intensified public pressure for measures to reduce the threat of flood damage within the Kissimmee Basin. The State of Florida responded with a request to the federal government to design a flood-control plan for central and southern Florida.

In 1948, Congress authorized the U.S. Army Corps of Engineers to initiate construction of the Central & Southern Florida Project for Flood Control and Protection. In 1954, Congress specifically authorized the Kissimmee River portion of the project, which was planned and designed from 1954 to 1960.



Between 1962 and 1971, the meandering river was transformed into a 56 mile-long, 30 foot deep, 300 foot-wide canal. Excavation of the canal and deposition of the resulting spoil eliminated approximately 35 miles of river channel and 6,200 acres of floodplain wetland habitat. The floodplain was transformed into a series of impounded reservoirs (Pools A-E). Inflow from the upper basin was regulated by six water control structures (S-65s). Water control structures and canals were built in the upper lakes region which allowed regulation of water flow within and between the lakes of the upper basin.



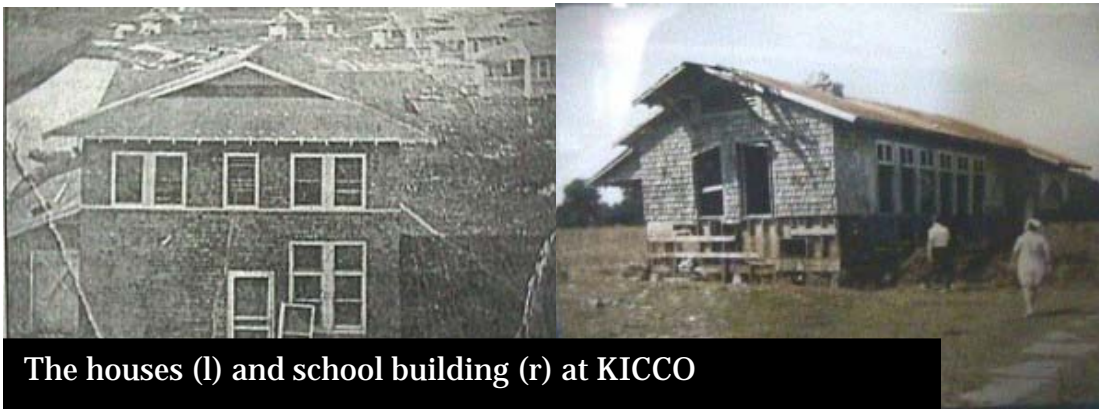
**The “Crying Cow” report that demanded better flood protection**

Transformation of the river-floodplain ecosystem into a series of deep impoundments drained much of the floodplain, eliminated historical water-level fluctuations, and greatly modified flow characteristics. Approximately 26,000-31,000 acres of pre-channelized floodplain wetlands were drained, covered with spoil, or converted into canal. The floodplain at the lower end of each pool remained inundated, but pre-channelization water level fluctuations were eliminated. The physical effects of channelization, including alteration of the system's hydrologic characteristics, largely eliminated river and floodplain wetlands and degraded fish and wildlife habitat of the Kissimmee River ecosystem.

Kissimmee River Pool A extends from the south side of SR 60 along both sides of the C-38 canal (the channelized Kissimmee River) to the northern boundaries of the Avon Park Airforce Range on the west side of the river and Kissimmee Prairie Preserve State Park (also owned by the District) on the east side. Pool A consists of the KICCO Management Area on the west side (7,426 acres) and the Blanket

Bay Management Area (4,619 acres) on the east side. Pool A was designated as a Save Our Rivers acquisition project as it was considered critical to the restoration of the Kissimmee River. The KICCO property was purchased in 1983 and 1985 by the District. Blanket Bay was purchased in 1996 (2,527 acres) and 1,718 acres that had been acquired in 1974 by the State with a flowage easement granted to the District.

The Kissimmee River Restoration Project was authorized by Congress in the 1992 Water Resources Development Act as a joint partnership between the District and the US Army Corps of Engineers. The project will restore over 40 square miles of river/floodplain ecosystem including 43 miles of meandering river channel and 27,000 acres of wetlands.



The houses (l) and school building (r) at KICCO

The KICCO property had been owned and operated by the Kissimmee Island Cattle Company since the 1890s. It contained a company town from about 1915 until the late 1920s. Most of the structures were destroyed in the 1947 flood event. The Bureau of Archeological Research within the Department of State's Division of Historic Resources surveyed the few remnant structures in the 1980s after the District acquired the property. Subsequently the buildings were demolished after no other agency or groups were willing or able to accept a relocation of the structures.

POOL A Management Area General Management Plan 2006 – 2011  
South Florida Water Management District, Land Stewardship Division

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**Pool A History – Table 1**

	<b>ACTIVITY</b>	<b>EFFECT ON FLOODPLAIN</b>
1890's	KICCO acquired and the native range used for cattle ranching	While this would have been an intensification, cattle had been grazing the area since the land belonged to Spain
1915	Ditches were carved through the land west of the river for the establishment of KICCO's company town.	Drained wetlands and created an untenable situation of having a settlement and large operation in the 100-year floodplain
Late 1947	Major hurricane strikes with a 100 – year flood event in the Kissimmee River Valley. Subsequent “crying cow” report demanded better flood protection for agricultural lands in the Kissimmee River Valley	The flood event revitalized the flood plain and surrounding wetlands.
1948	Congress authorizes the Central and Southern Florida Project for Flood Control and Protection	Set the stage for massive drainage and flood control projects
1954	The Kissimmee River channelization is authorized by Congress	
1954-1960	Planning and Design completed for the Kissimmee River flood control project	
1962-1971	Channelization of the Kissimmee River	Transformation of the river-floodplain ecosystem into a series of impoundments, it drained much of the floodplain
1971-1974	Damage from the restoration is officially recognized by the Central and South Florida Flood Control District and planning begins to restore the River.	It was clear that any attempt to restore the River would require nearly all of its floodplain to be in public ownership so that the river could flood naturally
1974	The State purchased 1718 acres within Blanket Bay, and granted a flowage easement to the District	State acquisition kept Blanket Bay from being developed.
1983-1985	KICCO acquired by the South Florida Water Management District	An existing development and incompatible use was removed.
1992	Kissimmee River Restoration Project authorized by Congress	Set the stage for the restoration of much of the River's former floodplain
1996	Remainder of Blanket Bay acquired by the District	
1997	Construction begins on Pool A restoration projects	Projects included increasing the amount of water that could be brought into the Kissimmee River, removing spoil mounds in the south side of Blanket Bay, and constructing weirs at S-65A that allow Pool A wetlands to retain more water.
2003	A drainage canal was filled at the south end of KICCO.	Improved hydrology of Tick Island Marsh
2005	Packingham and Buttermilk Slough hydrologic restoration project in the northern half of KICCO was funded through a USDA Wetland Reserve Program grant	The restoration project will reestablish the flow of water across area and allow the water level to be controlled to mimic natural hydrologic fluctuations.
2006	Design completed on the Packingham Slough and Buttermilk Slough projects	A prescribed fire was planned for 2006 to aid the reestablishment of marsh plants when the natural hydrologic fluctuations are reestablished.

#### **4. Resource Inventory**

*Policy 140-25(3)(e) Inventories of natural and historic resources shall be performed to provide information for effective land management planning, natural community maintenance and ecological restoration.*

Floral and faunal species are inventoried, and natural communities are mapped by LSP personnel, volunteers, or private contractors. The data helps District land managers with resource management planning.

Inventory data is on file within the Planning Section of the LSP. LSP shares natural areas and species data with the Florida Natural Areas Inventory (FNAI) through a Memorandum of Understanding (MOU).

Floral and faunal inventories of the MA were included in the environmental assessment initiated shortly after acquisition. This served to determine the presence of listed species and to serve as ecological baselines. Additional surveys have been completed with species' lists being updated regularly by volunteers, contractors, and District & FFWCC staff. Archeological and cultural resource inventories were conducted in coordination with the Department of State, Division of Historical Resources and are described in the State's Master Site File.

##### **4.1 Hydrology**

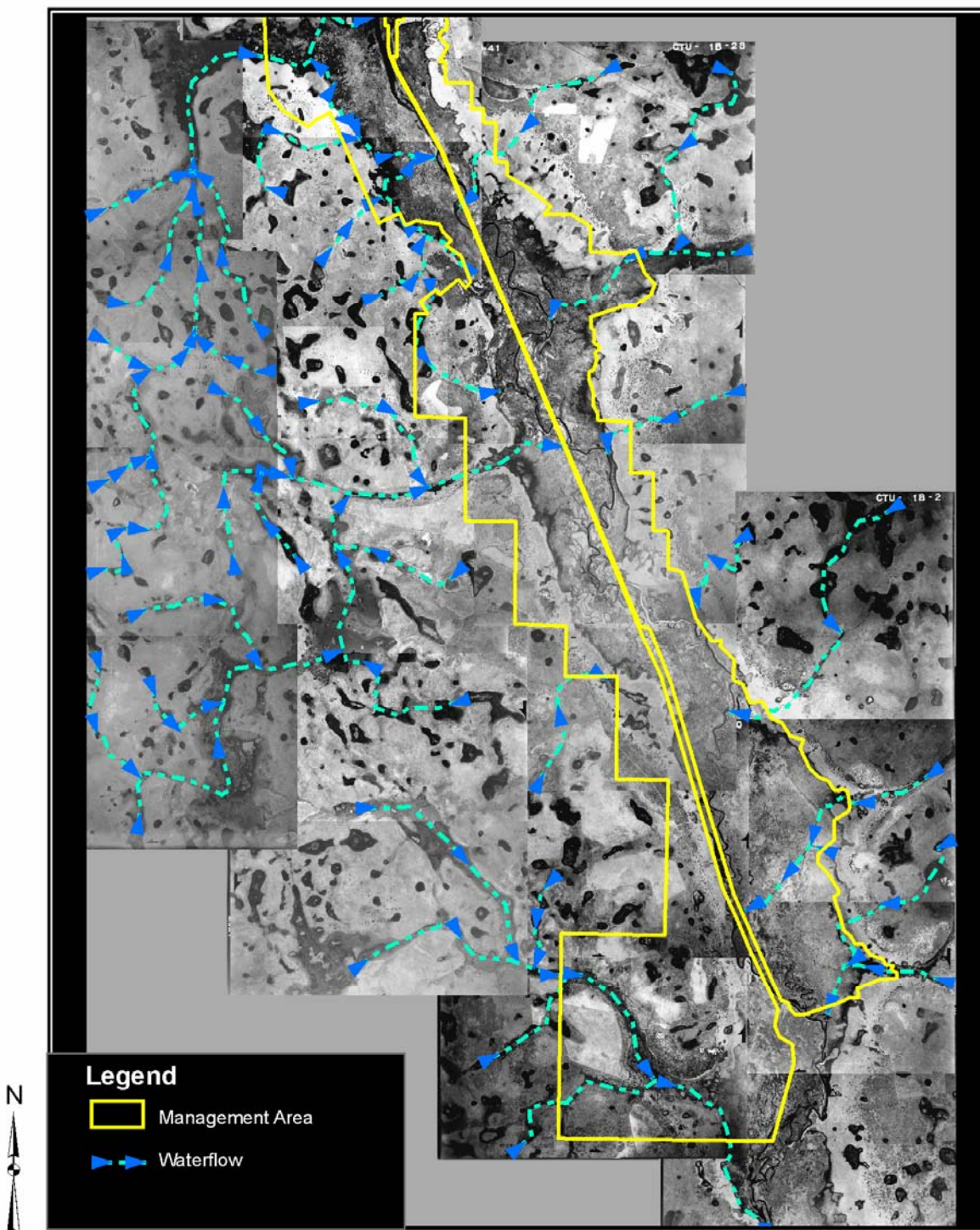
*Policy 140-25(1) The basis for the Land Stewardship Program is the protection and management of natural hydrologic resources.*

The S-65A basin is approximately 161 square miles, whose adjacent basins include the Lake Kissimmee basin to the north and the S-65BC basin to the south. (map 4). The Kissimmee River, bisecting the basin from North to South is the dominant drainage feature of the basin.

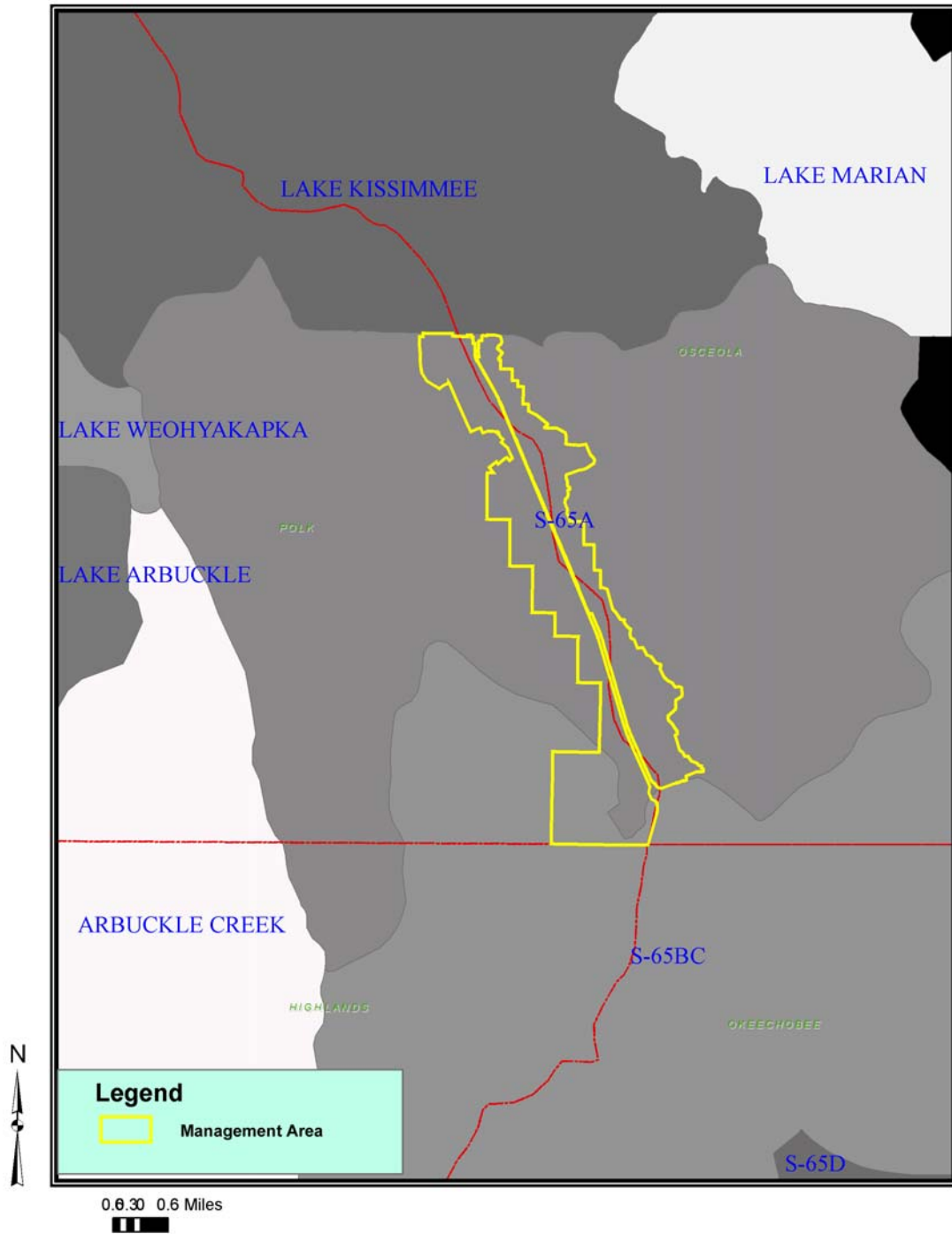
Water from agricultural uplands both east and west of the floodplain drain into the channelized Kissimmee River via several tributary sloughs. Many small agricultural drainage ditches feed into the sloughs increasing the efficiency through which the depression marshes in those lands drain.



**Map 3. Historic Hydrology (1941 aerial composite).**

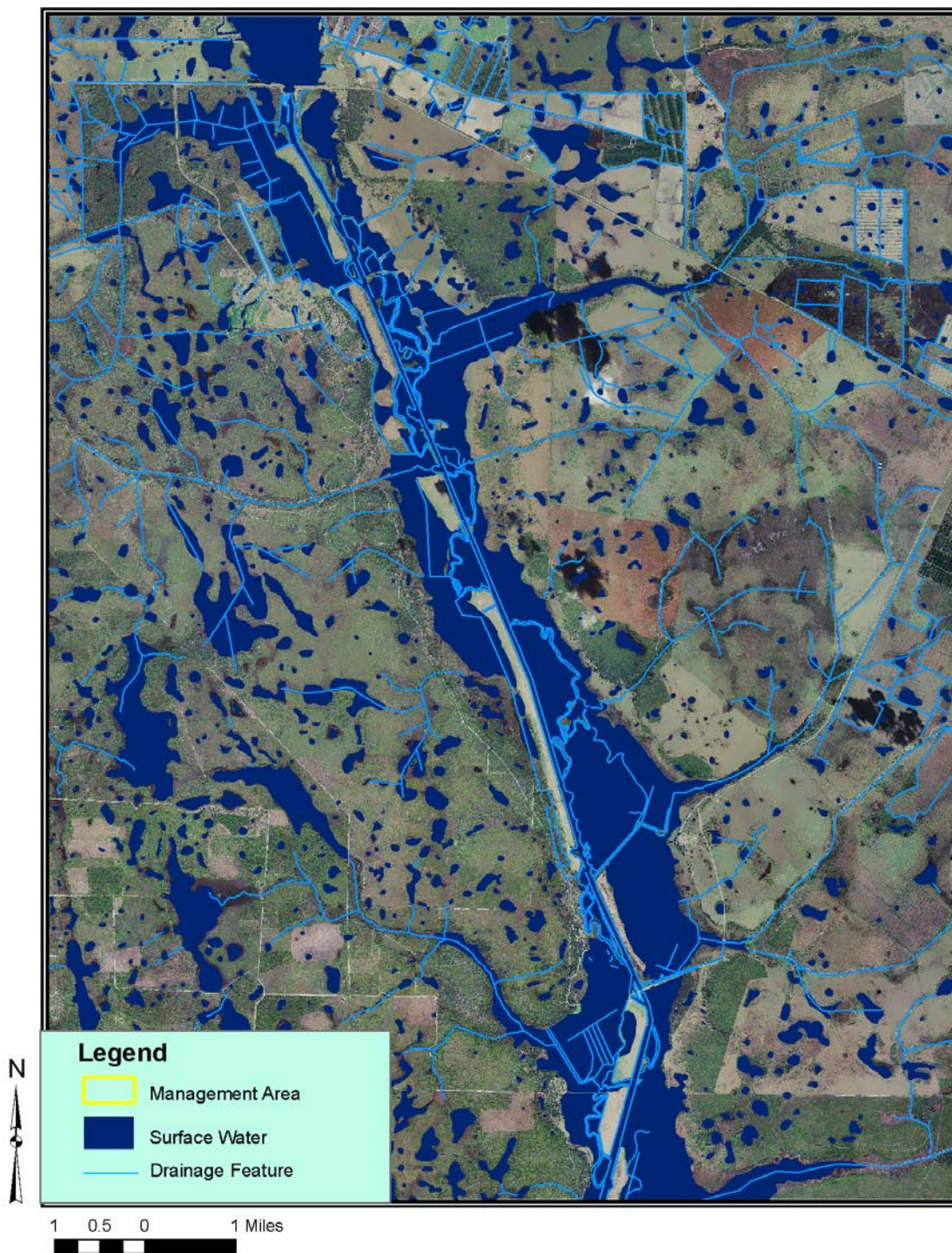


**Map 4. Hydrologic Basins**





## Map 5. Surface Waters



Because of its proximity to the channelized Kissimmee River, the MA's hydrology is complicated and dynamic. Several major features affect the MA's hydrology:

- Older small agricultural drainage ditches
- A pre-channelization levee in Packingham and Buttermilk Slough
- Spoil berms along the channelized Kissimmee River
- The historic town of KICCO and the current access road grades
- The S-65 and S-65A water control structures and affiliated impoundment structures

All alterations within the MA have combined to make a system that is unlike the historical system. To moderate the dynamic hydrology and create a more natural hydrologic pattern, the District plans to implement several hydrologic restoration projects, starting with the Packingham and Buttermilk Slough systems in the northern third of KICCO (see Restoration Projects, section 5.1).

## **4.2 Soils**

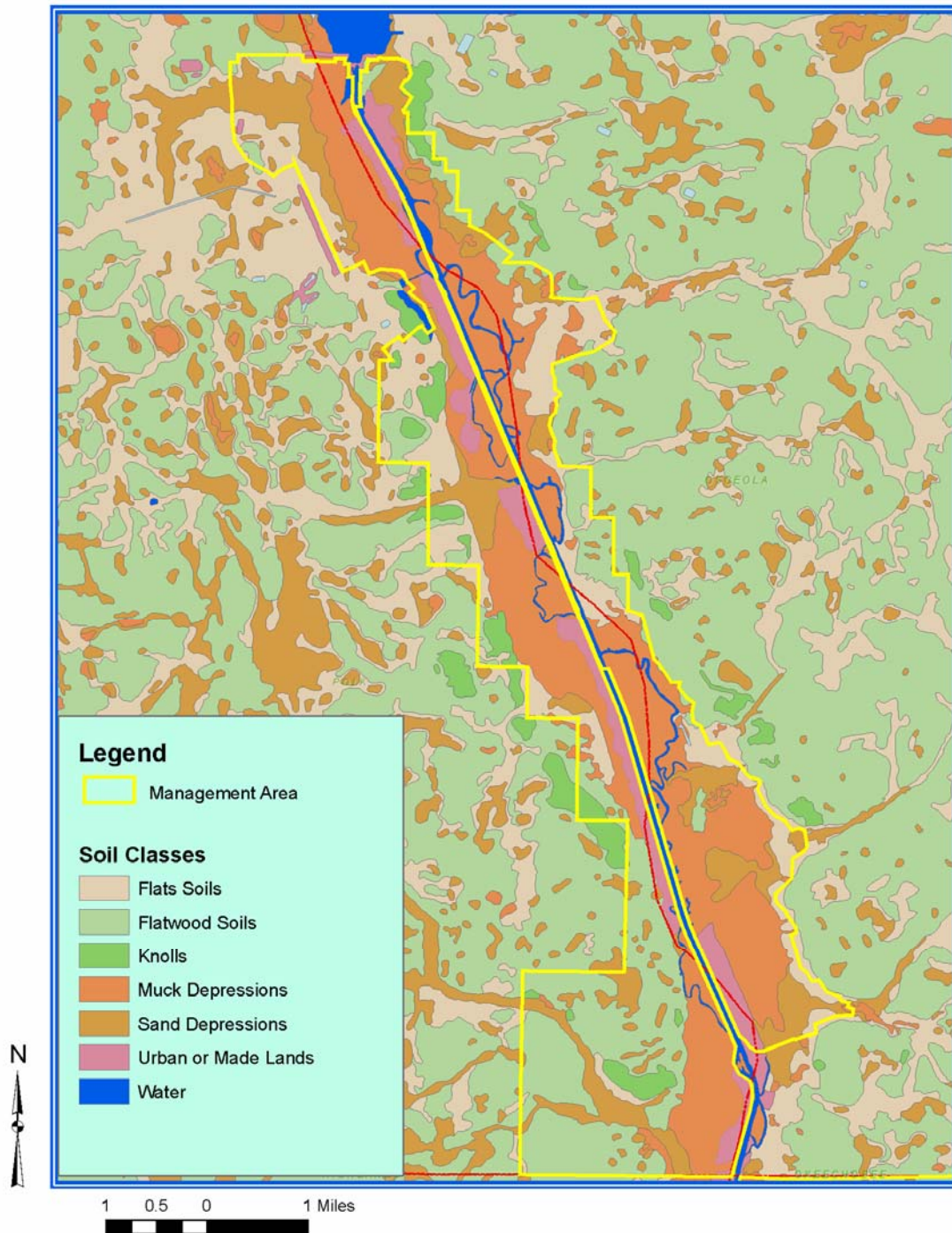
There are five distinct soil categories within the MA as defined by the Natural Soil Landscape Positions (NSLP) soil classification system: flatwood soils, flats soils, sand depression soils, muck depression soils, and urban or made lands. The NSLP groups South Florida soils into 12 categories based on hydrology and soil morphology that reflect the local relative topography, hydrology, and vegetation of the area. Soil classification descriptions are included as **Appendix B**.

## **Soil Contamination and Excavation Sites**

There are two known cattle dipping vats left over from the historic cattle dipping operations, and an area of lead contamination that has spread northward from the shooting range in the River Ranch complex into the soils on the southwest end of Buttermilk Slough (Map 7). The lead contamination near the shooting range has been found to contain levels that could be harmful to wildlife, so it will be bermed to prevent inundation that would make it more desirable as wildlife habitat. The two dip vats have been remediated, along with a recommendation that no water wells be installed near the site of the vats. A third vat has been identified on the south end of the River Ranch complex with a plume of contaminants that goes into the area of Long Hammock where the District has acquired a flowage easement, but the land is owned by the resort.

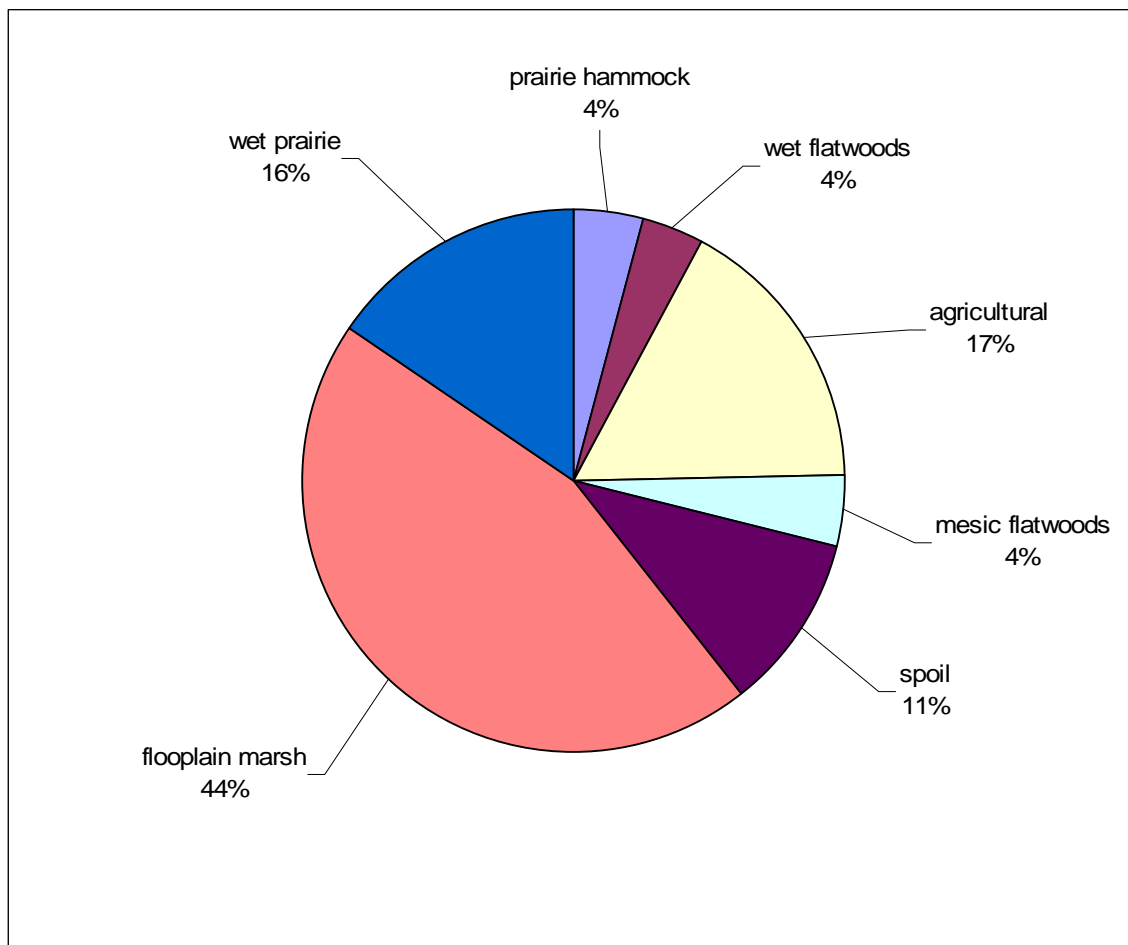


## Map 6. Soils

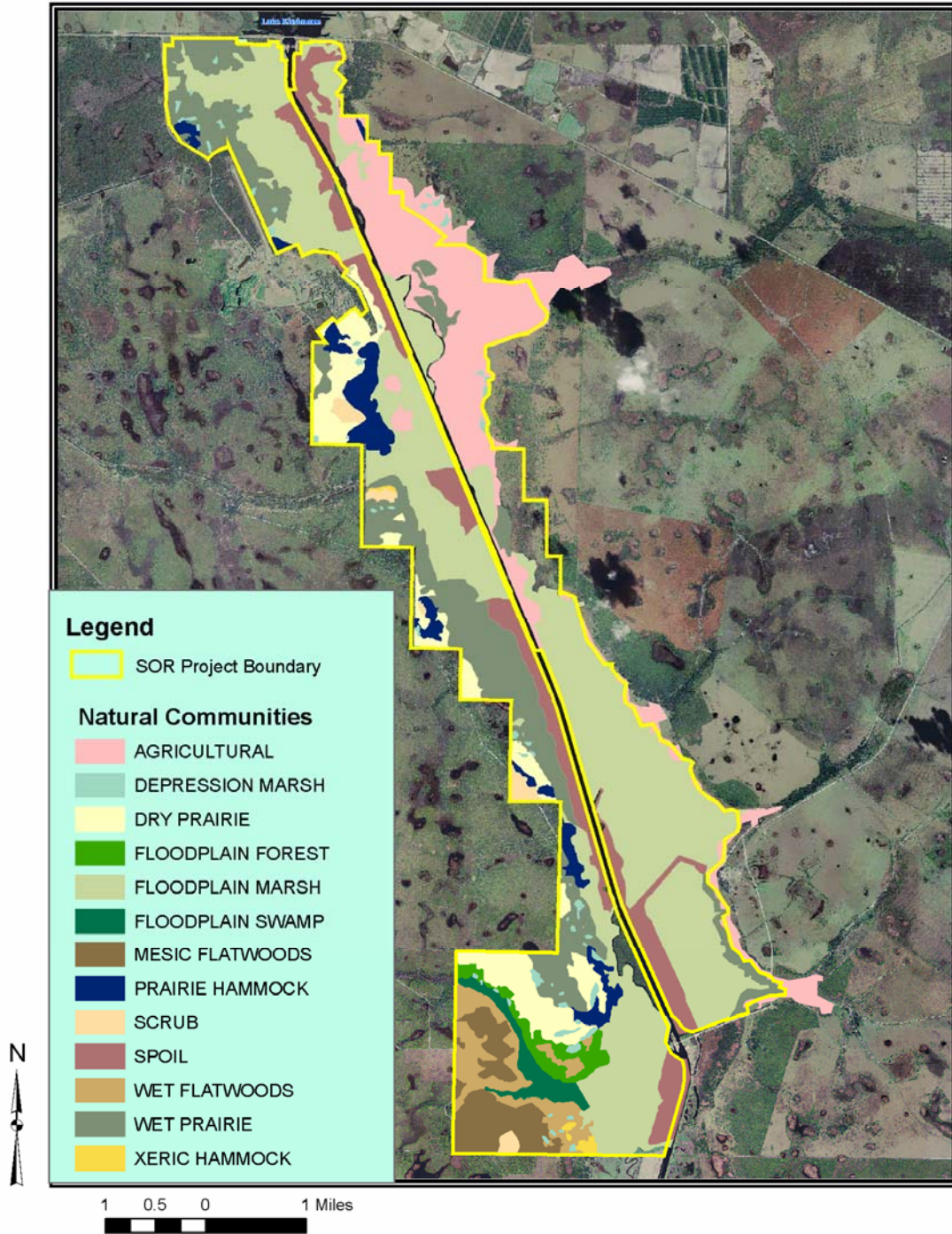


### 4.3 Natural Communities

11 natural community types, as classified by the Florida Natural Areas Inventory (FNAI), comprise the MA. The LSP classifies natural community types by the Florida Natural Areas Inventory (FNAI) Classification system. Community condition varies widely, depending on previous and current land use, hydrologic alteration, and exotic infestation. Descriptions are included as **Appendix C**.



**Map 7. Natural Communities.**





#### 4.4 Wildlife

The natural communities within the project provide habitat for numerous bird, fish, amphibian, reptile, and mammal species, several of which are listed federally or by the state. At least 16 species considered rare, endangered, threatened, or of special concern have been noted. FWC completed a preliminary inventory of wildlife in 1994 that, in addition to the listed species, includes 14 mammals, 55 birds, 28 reptiles and amphibians, and 40 fish species that are common to the MA. (See 5.4 Wildlife Management and Appendix E: Species Lists.)

#### 4.5 Cultural Resources

*Policy 140-25(3)(j) Archaeological and historic resources are protected by site identification and inter-agency coordination with the Florida Division of Historical Resources. Land stewardship planning shall include an analysis of archeological data accompanied by appropriate public education opportunities.*



**A 3D computer model of the KICCO town (looking south).**

The primary known cultural feature of the MA is the site of the small KICCO company town. Built at the location of a former riverboat landing, the town served KICCO employees from about 1915 until the late 1920s with at least some occupation continuing until the flood event of 1947 destroyed many of the structures. The Bureau of Archaeological Research within the Department of State's Division of Historic Resources surveyed the few remnant structures in the 1980s after the District acquired the property. Subsequently the buildings were demolished after no other agency or groups were willing or able to accept a relocation of the structures.

The District plans to promote research on the site within the MA and safeguard its integrity, primarily through prohibiting ground disturbing activities. Management activities planned for this area are exotic plant control, vegetation management, and prescribed burning. Staff from FDHR may revisit these sites to conduct additional investigations.

**Map 8. Company town of KICCO.**



KICCO townsite 1941



KICCO 1953, most of the structures destroyed



**Map 8. Company town of KICCO.**



KICCO townsite 1968, trees removed



KICCO townsite 2004, with a denser canopy of oaks and former marsh infested with shrubby vegetation



## **5. Natural Resource Management**

*Policy 140-23 The Land Stewardship Program mission is to provide natural resource protection and management while allowing compatible multiple uses on designated public lands.*

Resource management includes all applied programs wherein activities manipulate, modify, and control natural features within the MA. All SOR lands shall be managed and maintained in an environmentally acceptable manner and, to the extent practicable, restored and protected in their natural state and condition. Management responsibilities are defined by statute, and directed by Best Management Practices. Goals and objectives for KICCO and Blanket Bay clarify resource management guidelines necessary to fulfill the District's land stewardship responsibilities. Programs consist of agriculture, archeological and historical, fire, forestry, hydrologic, range, vegetation, and wildlife management.

At KICCO and Blanket Bay, LSP resource management activities include cattle grazing, a large scale hydrologic restoration project, understory shredding, prescribed fire, and exotic plant and hog control.

### **5.1 Restoration Projects**

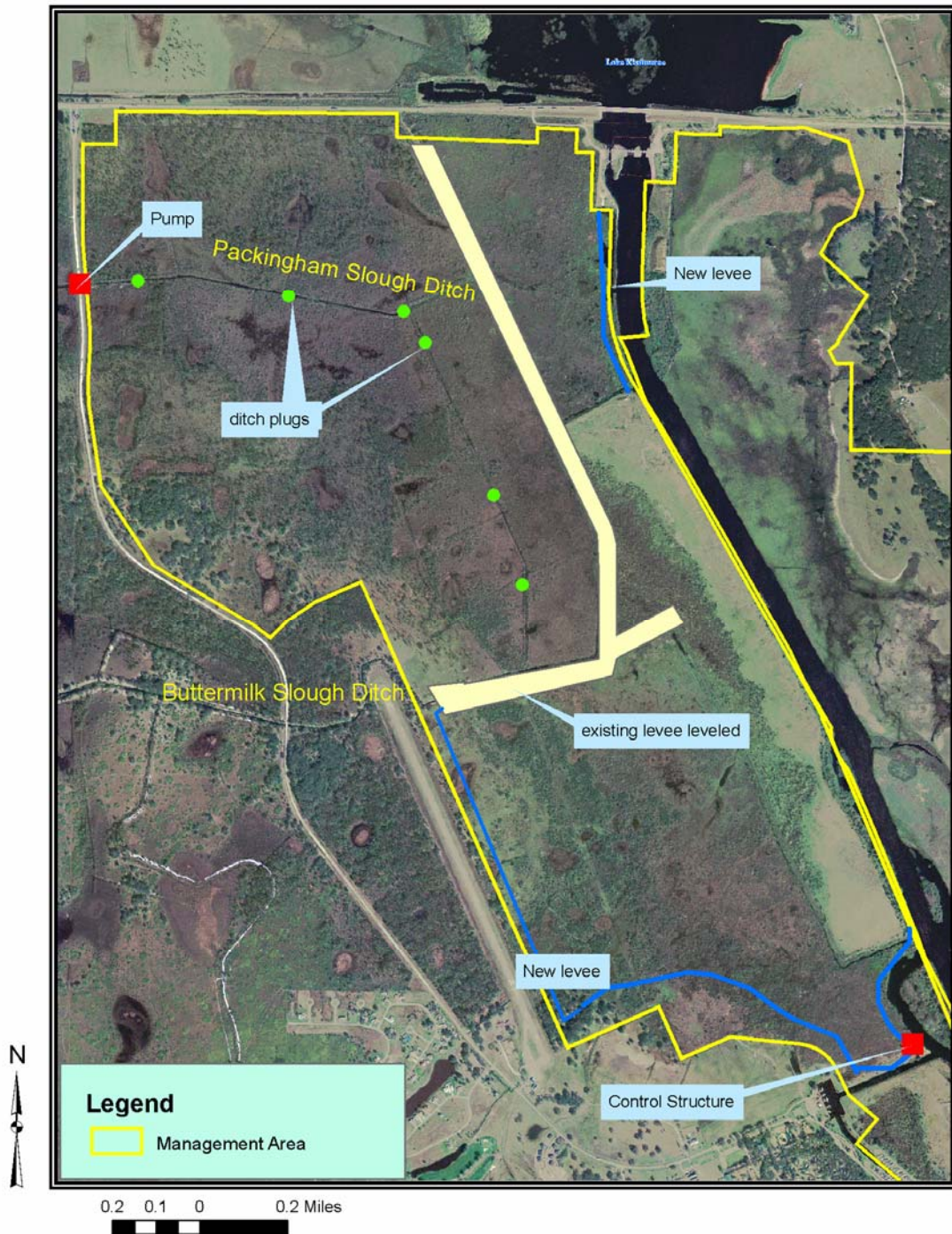
*Policy 140-25(1) The basis for the Land Stewardship Program is the protection and management of natural hydrologic resources.*

*Policy 140-25(1)(c) Where feasible, an attempt shall be made to restore a more natural hydroperiod on tracts where the drainage patterns have been altered.*

The District is utilizing a USDA NRCS Wetlands Reserve Program (WRP) grant to restore the northern marshes in KICCO that encompass Packingham and Buttermilk Slough floodplain marshes (Map 9). The WRP funds restoration projects on wetlands that have been drained for agricultural purposes. The channelization of the Kissimmee River to provide flood protection for surrounding property owners increased the efficiency with which the sloughs drained. Woody vegetation like Brazilian pepper, wax myrtle, and groundsel trees have moved into the drained marsh system.

The restoration project includes shredding off the existing woody vegetation, plugging the interior ditches, leveling the interior levee, and constructing the perimeter levee with a water control structure on the southeast end to enable the restoration of the historic hydrology of the marsh. A pump on the northwest end will be built to prevent flooding of properties west of the project during flood events.

**Map 9. Restoration Projects.**



### 5.1.1 Monitoring

*Policy 140-25(3)(f)(2) Monitoring shall be conducted to identify landscape changes resulting from management activities.*

Tracking environmental response to restoration projects provides valuable information on progress toward restoration objectives. Information obtained by monitoring specific sites assists land managers in making sound ecological choices for each unique parcel in the LSP.

Using GIS and GPS technology, the District tracks the location of exotic plants throughout the MA. This helps the LSP monitor the effectiveness of the exotics control program and track the extent and severity of infestations.

Additionally, the District, through private contractors, has initiated vegetative monitoring throughout the MA. This will provide baseline information for future studies and will help determine the effects of future restoration projects in the MA. As part of this effort, eleven 360 degree photomonitoring points have been installed throughout the MA with additional points being added as needed. Panoramic photos are taken from these points at least annually. Eight of those photopoints are within the restoration project in Packingham and Buttermilk Sloughs in KICCO, and are accompanied by square meter groundcover vegetation monitoring plots.

**Table 3. Assessments & Inventories**

Survey Type	Performed by	Date
Burrowing Owl Surveys	FWC	ongoing
Red Cockaded Woodpecker Surveys	Archbold Biological Station	ongoing
Scrub Jay Surveys	Archbold BS and FWC	ongoing
Environmental Site Assessment	PSI engineering	2006
General Site Inspection	District	1983
Biological/Hydrologic Studies	District	1986
Vegetative Photomonitoring	District	2005

## **5.2 Vegetation Management**

*Policy 140-25(2)(d) Where practicable, an attempt shall be made to restore and maintain desirable vegetation to promote habitat diversity in areas where invasive exotic vegetation, grazing practices, or improved land uses have substantially altered the historic landscape.*

*Policy 140-25(3)(l) Mechanical equipment may be used in conjunction with prescribed burning and other management tools to control vegetation and restore habitat structure.*

Vegetation management at KICCO and Blanket Bay include prescribed fire, shredding, mowing, herbicide application, cattle grazing and tree harvesting to reduce fuels, promote fire-dependent plant communities, reduce exotic and nuisance infestations, stimulate herbaceous species growth, and improve habitat for wildlife and rare plant species. Hydrologic enhancement will be employed at the Packingham and Buttermilk Slough Restoration Project. Vegetation maintenance practices are detailed in activity plans (APs) produced by the region's acting land steward. APs are available at the regional office or the LSP main office in West Palm Beach. Vegetation control and maintenance is executed by District or FWC field personnel or through contracts. FWC mows 30 to 40 acres each year to enhance turkey forage. Shredding of woody vegetation is proceeding in pine and prairie communities to open the understory which allows more plant diversity and improved wildlife habitat. These areas will subsequently be maintained with fire

### **5.2.1 Exotic/Invasive Plants**

*Policy 140-25(2)(c) Management practices will strive to identify existing infestations and implement appropriate control or eradication measures.*

*Policy 140-25(3)(b) Exotic plant control in all management areas shall strive to attain a level of success where periodic maintenance eliminates the infestation or reduces the coverage of exotic plants.*

South Florida's subtropical climate provides an excellent growth environment for the rapid spread of exotic plants that can cause extensive alterations to natural ecosystems. Environmental changes caused by extensive hydroperiod alterations have been an important factor in exotic plant invasion. Exotic plant invasion can result in partial or total displacement of native plants, loss of wildlife habitat, and the degradation of public use areas.

The LSP targets Category I and II non-native plant species as identified on the Exotic Pest Plant Council's biennially updated list of *Florida's Most Invasive Species* (<http://www.fleppc.org/>). Category I species include non-native plants that invade and disrupt Florida native plant communities. Category II plants

have the potential to invade and disrupt natural successional processes. Both Category I and II exotics are considered invasive and a threat to the function and ecological stability of Florida's natural communities.

The District has treated the following Category I plants within the MA: Japanese climbing fern (*Lygodium japonicum*), Old World climbing fern (*Lygodium microphyllum*), cogon grass (*Imperata cylindrica*), Brazilian pepper (*Schinus terebinthifolius*), and tropical soda apple (*Solanum viarum*). Of particular concern is climbing fern. The District treats and surveys the climbing fern infested areas several times a year to control established infestations and locate new ones in the MA.

Invasive exotic plant control measures include a combination of herbicide application, prescribed fire, roller chopping, mowing, cattle grazing and physical removal. When restoration projects are complete the District will also be able to use inundation as a means of exotic control. Selection of control measures is dependent upon species type, environmental factors, and natural communities impacted. Private contractors conduct exotic plant control activities in cooperation with the District's Vegetation Management Division.

District or FWC field technicians also provide supplemental support on small or sporadically distributed infestations. Generally, treatments in the MA are scheduled so that each unit is covered annually; however, schedules are adjusted based on current conditions. Areas of treatment are scheduled based on surfacewater conditions, time since last treatment, severity of infestation, public use, and consistency with other management operations.

### **5.2.2 Rare, Threatened and Endangered Species**

*Policy 140-25(2)(b) Particular emphasis shall be placed on the identification, protection and management of rare, threatened and endangered species.*

Listed species are those plants and animals considered rare within a specific geographic area by the U.S. Fish and Wildlife Service (FWS), the Florida Fish and Wildlife Conservation Commission (FWC), Florida Natural Areas Inventory (FNAI), and the Florida Department of Agriculture and Consumer Services (FDACS). The plant list of the MA (appendix d) contains several listed species (Table 4).

**Table 4. Plants Occurring on the Pool A Management Areas that are listed by the Florida Department of Agriculture and Consumer Services as Threatened (T), Endangered (E), or Commercially Exploited (C).**

Common Name	Scientific Name	Status
Catesby's Lily	<i>Lilium catesbaei</i>	T
Florida Jointweed	<i>Polygonella basiramia</i>	E
Giant Orchid	<i>Pteroglossaspis ecristata</i>	T
Cardinal Wild-pine	<i>Tillandsia fasciculata</i>	E
Giant Wild-pine	<i>Tillandsia utriculata</i>	E

The LSP establishes appropriate fire and hydrologic regimes, and controls invasive exotics in natural communities with the intent of perpetuating listed plant species. District Public Use Rules aid in the protection of native habitat and specifically prohibit destroying, defacing, or removing any natural feature or native plant on District lands. In this manner, listed plants are given lawful protection and environmental conditions suitable for their growth and reproduction.

Several listed bromeliad species occurring on the MA may be threatened by the exotic Mexican weevil (*Metamasius callizona*) that has caused destruction of native bromeliads in other south Florida locations. Two species of once abundant bromeliads, *Tillandsia utriculata* and *Tillandsia fasciculata*, have been placed on the state's list of endangered plant species as a direct result of this weevil. District LSD staff will conduct periodic surveillance of areas of potential infestations to assess management needs.

### **5.2.3 Forest Resources**

*Policy 140-25(3)(h) Sustainable use of forest resources shall be conducted where these activities adhere to a series of environmental criteria (see 1999 Forest Management Plan) that meet Land Stewardship Program goals. Timber contractors will be required to meet silvicultural Best Management Practices (BMP) developed for Florida forests.*

*Policy 140-25(5)(b)(3) Timber sales will be conducted to improve forest health or to support specific forest management goals.*

District LSP policy designates its properties as multiple-use resources, which include timber harvesting. However, such activity must be compatible with LSP goals and objectives and meet strict environmental criteria:



- The area planned for silvicultural rotation is currently in an “improved” or disturbed state (i.e. bahia pasture, existing pine plantation)
- The site to be planted is not scheduled for future hydrologic restoration, or the site to be harvested is scheduled for hydrologic restoration and existing timber will be lost as a result of flooding
- The area does not contain any valuable resources (e.g. endangered species) that may be harmed by changes in land use
- Forest operations would not require major road construction or improvement for accessing and processing timber, particularly within or across wetlands or other sensitive plant communities
- The area to be managed currently requires maintenance (i.e., burning, mowing)
- District costs would be reduced as a result of inclusion in the forest management plan
- The area contains timber that requires salvage following fire and/or insect or disease damage, and could be subject to a sanitation harvest with minimal environmental impact
- The area provides special needs for endangered species (e.g., red-cockaded woodpecker) management that requires timber stand improvement
- Harvest or planting will not create an aesthetically unpleasant scene or an impediment to public use
- Timber harvests will return forests to a more natural structure and improve forest health.

There were two small timber management operations recently completed in the KICCO Management Area that targeted locations where the pines were growing too densely.

#### **5.2.4 Range Resources**

*Policy 140-25(3)i Range management and grazing will be considered on improved or native ranges when the introduction of cattle will not conflict with other natural resource management and public use goals.*

Livestock grazing has occurred over the last century within South Florida and continues to be an important land use today. The Kissimmee River valley has been grazed for over four centuries since the early Spaniards stocked the Florida Peninsula with cattle. Cattle grazing is employed by the District and other land management agencies as a management tool, particularly for the reduction of fire fuel loads and maintenance of open habitat for the benefit of native wildlife.

#### Grazing Lease Agreement Parameters

The District exercises the option to lease grazing rights to the public when a property is acquired. Lease terms are based on carrying capacity and agreement

to certain management responsibilities by the lessee that may include non-native and nuisance plant control and/or fence construction and repair. The District limits certain activities deemed detrimental to the environmental integrity of each parcel leased, with each lease customized to ensure Best Management Practices. Leased SOR lands are on the county property tax rolls, and these tax payments become the responsibility of the lessee. Leases are re-evaluated at the time of termination with consideration to FWC and LSP management goals and objectives.

All of KICCO south of the River Ranch Resort is under lease agreement 13133 for the period of 2002 through 2007. In addition, all of the Blanket Bay area is under a lease agreement that as of June, 2006 is in the renewal process. Prescribed fire is used at KICCO to maintain the pastures and adjacent flatwoods and marshes.

### **5.3 Fire**

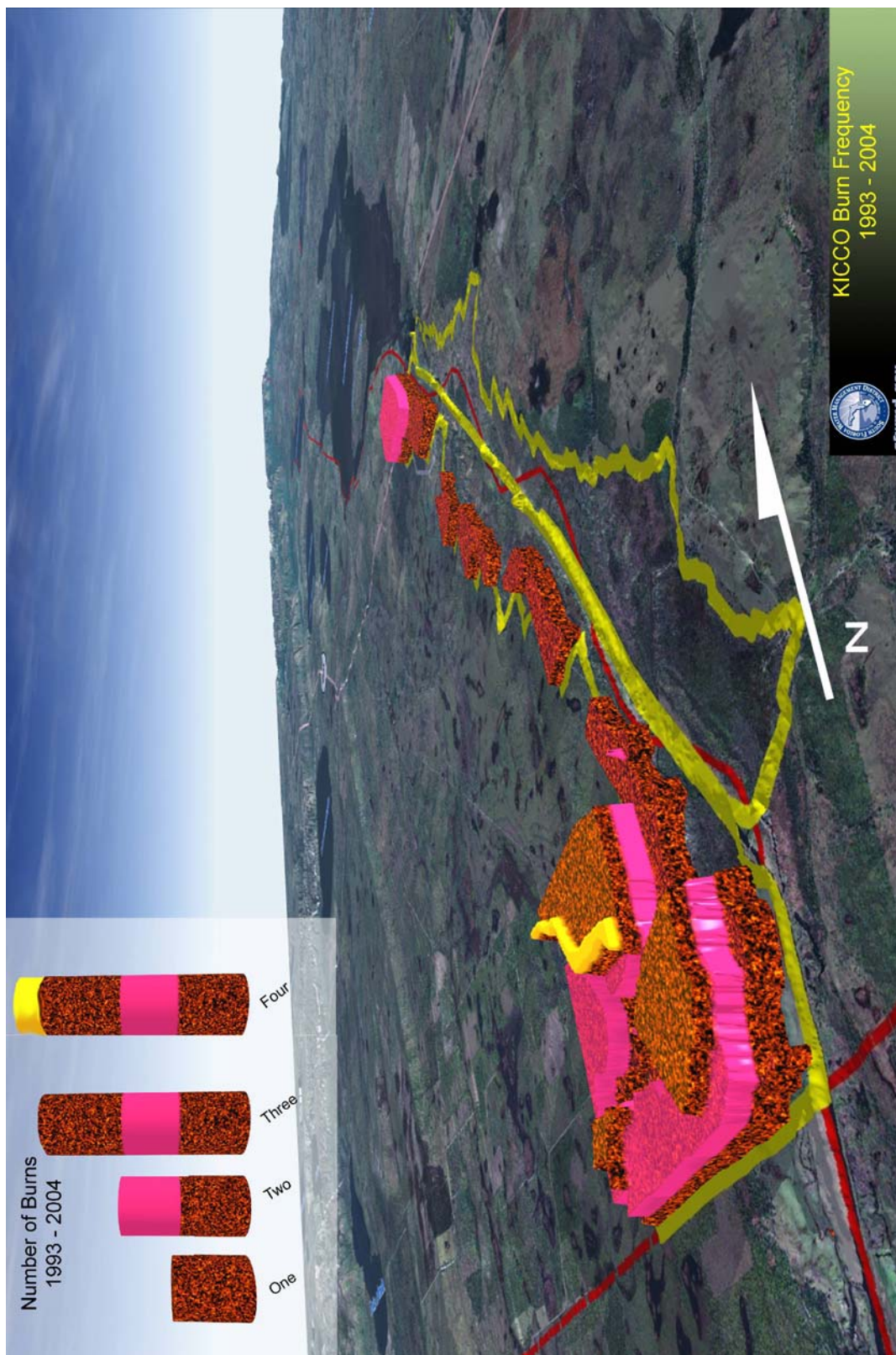
*Policy 140-25(5)(c)(3) Prescribed fire will be a primary management tool on District lands and will be applied within fire-maintained communities at appropriate intervals.*

The majority of natural communities on District lands rely on frequent fire to maintain their vegetative characteristics and biodiversity. Wildfires no longer occur with historical frequency or extent, and this has altered natural community structure and function. Prescribed fire attempts to mimic the benefits of natural wildfires that historically reduced fuel loads, recycled soil nutrients, and maintained natural communities by inhibiting hardwood encroachment and stimulating fire-adapted plant growth and reproduction. The LSP recognizes the benefits of fire and has integrated prescribed fire planning and application into its land management strategy.

#### **5.3.1 Fire History**

The District began its prescribed fire planning for the MA in the early 1990s and, since then, has conducted prescribed fires regularly in the marshes, prairies, and flatwoods. The small area of scrub is burned less frequently. **(Map 10)**. The previous owner of KICCO burned the property at a frequency of about every other year. The District has continued prescribed burning on a rotation based on the need of the plant communities being burned and the response of those communities to the last burn conducted. Since most of Blanket Bay is improved pasture, it has not been burned. There is an overgrown marsh in the south end of Blanket Bay where the District is planning on utilizing fire and shredding as a means to control the woody vegetation that has displaced the community. Fire data (prescribed and wild) is maintained in GIS to produce cumulative burn maps of the property.

**Map 10. Fire History map**



### **5.3.2 Prescribed Fire Planning**

A fire management plan is developed for each LSP management area. Each plan includes a description of location and natural community types, fire history, fire management objectives and constraints, and a burn prescription. The LSP bases all fire management plans on ecological research and professional experience. Fire frequency schedules for each natural community consider recommendations provided in *The Natural Communities of Florida* (FNAI, 1990). To mimic historic fire conditions, LSP emphasizes growing or lightning season burns (March-June) where practical. Natural firebreaks are utilized where possible to promote historic fire patterns, avoid soil disturbance, and reduce hydrologic flow disruption created by fire lines. Listed species life requirements are elements of prescribed fire planning. Application of fire, with appropriately timed herbicide treatments, is used as a tool for control of invasive and nuisance plants.

Burns are executed using proven methods as defined by the Prescribed Burning Act of 1990, 590.026 F.S. This legislation and associated administrative rules outline accepted forestry burn practices and is administered through DOF. The LSP has a five-person prescribed fire crew in the Okeechobee Service Center and utilizes other cooperating agency staff—DOF, FPS, & FWC to conduct burns at the MA. All LSP staff have completed the state certified burn course to ensure safety and proper technique.

Prescribed fire is applied within the MA at appropriate fire intervals for each natural community. The District concentrates on applying fire to each area of the property, reducing accumulated fuel loads, improving habitat, and providing a safer basis for future burns of increased frequency and lower intensity. Planning will emphasize yearly burn acreage to attain a 5 year rotation at minimum for the flatwoods and prairie communities. To mimic historical fire patterns, the District endeavors to burn during the growing season.

### **5.3.3 Wildfire Suppression**

*Policy 140-25(3)(d) The DOF [Division of Forestry] will be notified of all wildfires on District lands. LSP will provide initial suppression when commensurate personnel and equipment are available.*

Wildfires ignited by lightning are a common occurrence throughout Florida, and the MA receives numerous lightning strikes as indicated by past wildfires. It is District policy, and state law, that DOF is notified when a wildfire occurs on LSP-managed properties. The Land Stewardship staff assigned to the area will respond to and, if appropriate, begin suppression of area wildfires when detected. DOF will be called immediately while a fire assessment is made.

## 5.4 Wildlife Management

A primary objective in the stewardship of the MA is to maintain healthy fish and wildlife populations. The LSP accomplishes this in several ways:

- performing land management activities that maintain and/or improve native wildlife habitat
- conducting specific management beneficial to protected species
- conducting wildlife inventories where management operations may negatively impact listed species
- following management guidelines for listed species protection as determined by the *Multi-species Recovery Plan for the Threatened and Endangered Species of South Florida, Volume 1*, (U.S. Fish and Wildlife Service. 1998)
- reducing non-native pest species populations where appropriate
- maintaining a master file of confirmed and potential wildlife species
- cooperating with the FWC on wildlife management issues

MA wildlife management is directed toward production of natural species diversity consistent with the biological community types present. FWC maintains a lead role in wildlife management in the MA by:

- managing Public Hunts (The Fall Hunts and The Small Game Hog Management Hunts)
- monitoring one bald eagle nest
- monitoring 5 burrowing owl colonies
- monitoring 1 red cockaded woodpecker colony in cooperation with Archbold Biological Station
- monitoring to see if scrub jays move back into the area from the Avon Park Air Force Range
- assisting the District with Rx burns (recommendations, manpower, equipment, putting fire lines in, etc.)
- assisting the District with exotic control (periodically spray for lygodium, tropical soda apple, Brazilian pepper, cogon grass, etc.)
- conducting Turkey Bait Station Surveys
- maintaining one hunting campground
- conducting land management activities such as mowing to maintain wildlife openings and contracting vegetation management services
- posting of informational signs
- planting of food plots

### 5.4.1 Game Management

*Policy 140-25(4)(b)(4) Florida Fish and Wildlife Conservation Commission regulations shall govern hunting in areas opened for such use.*

As a Wildlife Management Area and Public Use Area, the FWC administers several hunting seasons in the fall, small game hog hunts in late winter, and spring turkey hunts. Management activities directed towards game management include mowing openings for wildlife and occasionally planting food plots. The hunting program is detailed in **Appendix D**.

#### **5.4.2 Exotic/Invasive Species**

Wildlife pest species are those non-native species that are harmful to native wildlife, that negatively impact native vegetation and wildlife or seriously interfere with management objectives. The LSP's goal for wildlife pest management is to reduce populations to attain an acceptable level of impact to natural plant and animal communities. The District land Steward uses personal knowledge of the problem and consultation with the FWC to define the acceptable level of impact. When population control measures are warranted, land managers consult with the FWC to determine an appropriate control technique that is humane and cognizant of public safety. The effects of pest population control efforts are monitored by periodic site evaluations.

The feral hog is a pest species within the MA. Disturbance caused by this species negatively impacts natural communities and interferes with land management operations. Their high fecundity, adaptability, rooting behavior, and omnivorous diet make them a potent destructive force and environmental concern. Their disruption of soil and vegetation alter natural communities and can be especially damaging in sensitive habitats that are slow to recover. Hog disturbance has occurred within most of the MA including wetland communities. Land management objectives are affected when rooting disturbance disrupts prescribed burns by preventing the spread of fire. Areas of disturbed soil are also more susceptible to exotic plant invasion. Soil rooting can create perilous conditions on hiking trails, and hog foraging can have a detrimental impact on small animal populations, ground-nesting birds, and MA infrastructure.

Currently, feral hog populations in the MA may be declining slightly in KICCO and are stable in Blanket Bay. Control methods are decided in consultation with the FWC including additional hog hunts and trapping. A District trapping contractor is used when necessary in KICCO.

#### **5.4.3 Rare, Threatened and Endangered Species**

*Policy 140-25(2)(b) Particular emphasis shall be placed on the identification, protection and management of rare, threatened and endangered species.*

Several species listed as endangered, threatened, or of special concern by state and federal agencies occur within the MA, including gopher tortoise (*Gopherus*



*polyphemus*), wood stork (*Mycteria americana*), bald eagle (*Haliaeetus leucocephalus*), Sherman's fox squirrel (*Sciurus niger shermani*), and Indigo snakes (*Drymarchon corais couperi*) (**Table 5**). Additionally, FWC has classified most of the MA as a Regional Biodiversity Hotspot. Hotspots represent areas which have high overlap for 54 declining species of wildlife plus known occurrences of rare flora, fauna, and natural communities (Cox *et al.*, 1994).

Impacts to these species from planned land management and recreational activities are of special concern. Activities that might jeopardize the well-being of these species may be altered or disallowed. District land management activities including prescribed burning, hydrologic restoration, exotic vegetation eradication, understory control, and selective forest thinning improve natural environmental characteristics that benefit listed species as well as a variety of other indigenous wildlife. FWC staff or staff from the Archbold Biological station have a monitoring program in place for bald eagles, red cockaded woodpeckers, crested caracara's, and scrub jays

**Table 5. Listed Animal Species: (T) Threatened, (E) Endangered, (SSC) Species of Special Concern**

Scientific Name	Common Name	Status	
		Fed	State
<i>Alligator mississippiensis</i>	American alligator	T	SSC
<i>Aramus guarauna</i>	Limpkin		SSC
<i>Caracara cheriway</i>	Crested caracara	T	T
<i>Drymarchon corais couperi</i>	Eastern indigo snake	T	T
<i>Egretta caerulea</i>	Little blue heron		SSC
<i>Egretta thula</i>	Snowy egret		SSC
<i>Egretta tricolor</i>	Tri-colored heron		SSC
<i>Eudocimus albus</i>	White ibis		SSC
<i>Falco sparverius paulus</i>	Southeastern American kestrel		T
<i>Gopherus polyphemus</i>	Gopher tortoise		SSC
<i>Grus canadensis pratensis</i>	Florida sandhill crane		T
<i>Haliaeetus leucocephalus</i>	Bald eagle	T	T
<i>Mycteria americana</i>	Wood stork	E	E
<i>Pandion haliaetus</i>	Osprey		SSC
<i>Pituophis melanoleucus mugitus</i>	Florida pine snake		SSC
<i>Sciurus niger shermani</i>	Sherman's fox squirrel		SSC

## 6. Public Use

*Policy 140-23 The Land Stewardship Program mission is to provide natural resource protection and management while allowing compatible multiple uses on designated public lands.*

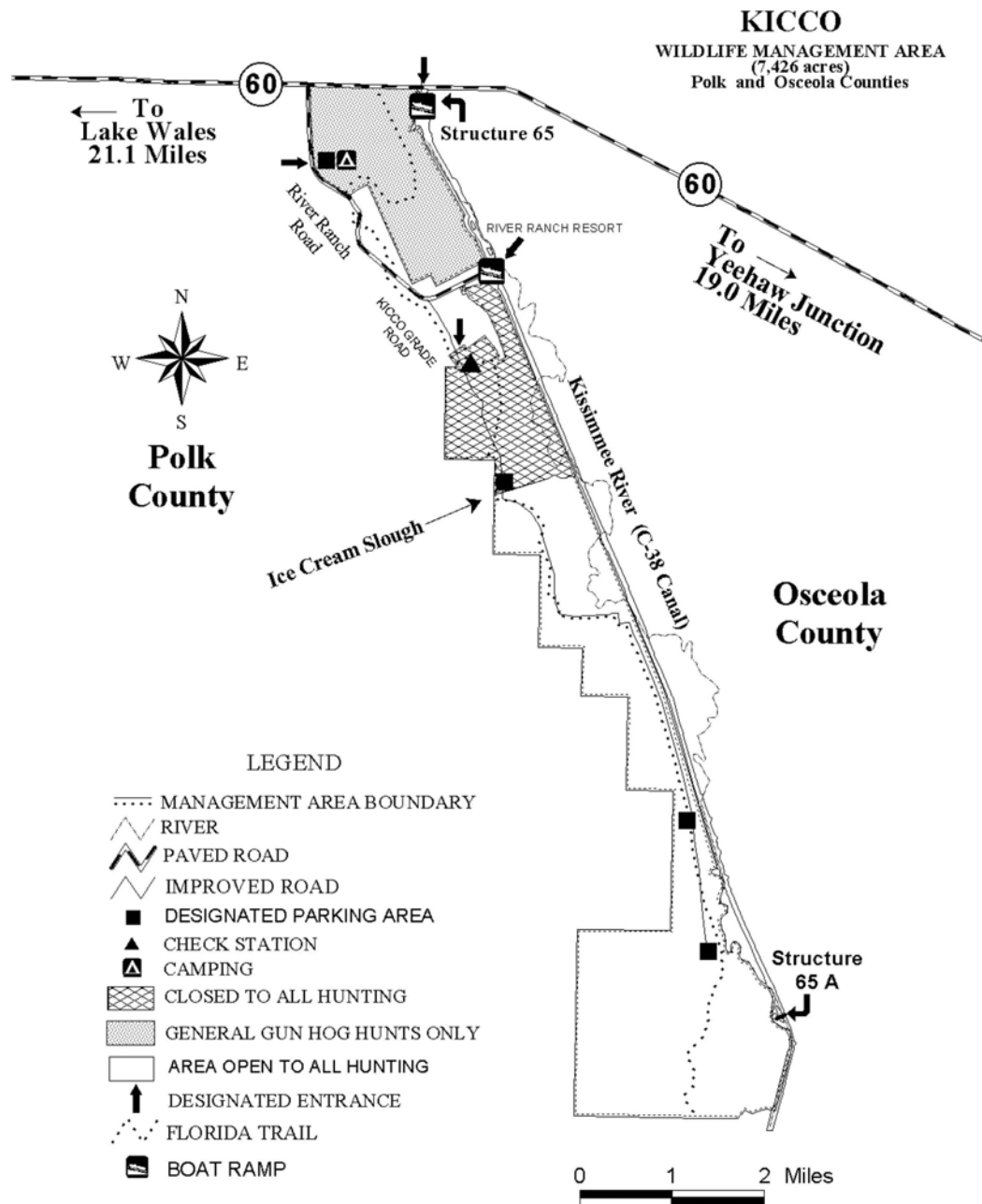
Section 373.1391 (1)(a) Florida statute states that wherever practical, lands acquired by the LSP shall be open to the general public for recreational uses. The District encourages public use of management areas for appropriate resource-based activities. Most SOR lands are available for public use, except in rare instances where there is no legal public access or where lease restrictions prohibit public entry.

The determination of compatible public uses will be based on the following criteria:

- consistency with the reason the lands were acquired
- restrictions and/or prohibitions imposed by easements, leases, reservations, adjacent land ownership, and other conditions of the purchase agreement
- infrastructure and support facility requirements, such as fences, gates, signage, entry design, stabilized off-road parking, trails, campsites, maintenance, and other operational and budgetary impacts
- opportunities for persons with disabilities
- limitations on use resulting from endangered species, other sensitive natural resources, archeological resources, or land management practices;
- public health, safety and welfare
- environmental education program opportunities.

Several recreational activities are appropriate and encouraged on the MA including boating, canoeing, bicycling, camping, equestrian, fishing, hiking, and hunting. There is a public boat ramp at the S-65 structure at SR 60, and a private pay ramp at the River Ranch marina. Blanket Bay is only accessible by boat from the river. The Florida National Scenic Trail winds its way through the KICCO Management Area. FWC maintains a hunting campsite east of River Ranch Road in the northern section of KICCO that is open for hog hunting in the general gun season during the fall. The District maintains three campsites in the southern half of KICCO and one accessible only by boat from the C-38 canal near the north end of the Blanket Bay Management Area.

## Map 11. KICCO Wildlife Management Area



## **6.1 Resource Protection**

*Policy 140-25(1)(d) Public use shall not result in detrimental impacts to water resources. When a public use activity produces detrimental effects on water resources, it shall be discontinued until an evaluation determines that such use is compatible.*

*Policy 140-25(3)(g) Resource protection shall be provided by professional law enforcement services through funded and unfunded contractual agreements to safeguard the public and protect natural and cultural resources on District-managed natural areas.*

*Policy 140-25(4)(b)(1) Public use regulations are set forth in 40E-7.511, Florida Administrative Code, to implement Section 373.1391(1)(b), Florida Statutes. Accordingly, the District shall publish and make available to the public a "Recreational Guide" for designated land management areas.*

Regulations that govern activities within the MA are in the District's *Recreational Guide*, which is available at the Okeechobee Service Center and at agency headquarters in West Palm Beach. Allowed activities include hiking, fishing, boating, canoeing, camping, hunting, equestrian use, biking, and nature study. FWC is responsible for enforcing laws, rules, and regulations applicable to the MA, along with the Polk and Osceola County Sheriffs' Departments. FWC has an officer housed at KICCO who helps patrol Pool A.

Management of public activities on District lands requires a strong commitment to resource protection while simultaneously promoting all appropriate public uses. The LSP emphasizes the enforcement of pertinent rules and regulations to protect natural resources and also provide a safe recreational opportunity. The resource protection program integrates contractual law enforcement to protect the natural resources and District assets. As part of the District's enhanced patrol contract with FWC, law enforcement officers conduct regular patrols throughout the year, increasing their presence during hunting seasons and at other times when public use is high. Law enforcement surveillance protects natural and cultural resources, deters illegal activity, and safeguards the public. Patrols are conducted with 4-wheel drive vehicles, boats, ATVs, aircraft, and on foot. The District's resource protection coordinator and the MA steward review biweekly reports and meet with officers to structure patrols based on resource needs.

Resource protection is also greatly enhanced by the presence and maintenance of continual, posted boundary signs that delineate SOR property boundaries. The MA perimeter is posted for its entire length. Fencing will be addressed as necessary.

## **6.2 Environmental Education**

Educational programs are developed and implemented on select management areas by cooperators interested in promoting increased visitor awareness and appreciation of natural areas and cultural resources. A central theme to these programs is the vital role of water management in maintaining resource viability and productivity. There are several kiosks in the MA including four at KICCO, one at Blanket Bay, and one at the boat ramp near the S-65 water control structure. The LSP encourages educational partnerships through memorandums of understanding, leases, and contract agreements.

## **7. Administration**

Administration of LSP lands is directed through the Land Stewardship Division. Policy decisions, planning and budgeting, procurement of personnel and equipment, contract administration, and issues of program development are administrative tasks coordinated through the Division. Input is provided from regional land stewards located at District Service Centers over the 16-county area. Regional land stewards handle regular administrative duties from their field locations to assure quick response to local concerns and management issues. MA administrative activities are handled through the Okeechobee Service Center.

### **7.1 Planning and Budgeting**

Planning is a major function of the LSP mission and is critical to maintain proper program focus, direction, and coordination with other agencies. LSP planning is accomplished by division planning staff in coordination with land stewards. Division level planning develops land acquisition strategy and project evaluation, produces the Land Stewardship Activity Report for the Florida Forever Workplan, and coordinates acquisition planning with other District and outside agency personnel.

*Policy 140-25(6)(b) General Management Plan (GMP): Provides a description of recommended management and is required for each Land Stewardship Management Area. The GMP follows a designated format and is updated every five years.*

GMP's are developed that detail strategies to guide management activities on individual project areas. The GMP defines goals and objectives, identifies major management issues, and describes management activities. Each plan is subject to a draft revision period where public comment and professional review is requested prior to plan approval. Each plan is revised on a five-year cycle by planning team staff.



*Policy 140-25(6)(d) Annual Work Plan (AWP): Summarizes activities corresponding with annual budget development and is prepared by the Operations Section of the Land Stewardship Program.*

Annual work plans (AWP) are developed each fiscal year for budget preparation and to address activities and projects targeted for completion within the upcoming fiscal year on individual properties. The AWP includes performance objectives for exotic plant control, vegetation management, prescribed burning, fencing, infrastructure maintenance, forest management, resource protection, public use development, environmental monitoring, and contract administration.

For Pool A the AWP and budget are developed in concert with program-wide operational priorities and the budgetary cycle. Current year MA annual plans are available at the District headquarters in West Palm Beach.

*Policy 140-25(6)(e) Summaries of management activities for each management area will be reported quarterly within the District and annually as part of the Florida Forever Work Plan.*

Each month land managers submit regional management reports to document progress toward achieving annual work plan objectives. The MA monthly reports are kept on file at District headquarters. LSP semiannual meetings address management problems and plan for future management operations.

*Policy 140-25(5) The District will secure dedicated funding sources, personnel and other resources to support program goals and objectives. Project funding needs and sources for cooperative management agreements with government and non-government entities will be identified during acquisition. A cooperative management agreement will designate a lead manager and identify whether District funding is required.*

The principal source of funding for the Land Stewardship Program is the Water Management Lands Trust Fund, administered by the Florida Department of Environmental Protection. Money for this dedicated fund is generated from the sale of state documentary tax stamps and is used for property acquisition and management. Additional funding and support may be obtained from NRCS WRP grants, the harvest of renewable resources, land use leases, in-kind management services from cooperating management partners, or no-cost services from user groups and volunteers.

Budget planning begins in March during the work planning process for the following fiscal year (October-September). Overall funding availability generally determines management activities. Budget distribution among the District's five land management regions is based on a programmatic prioritization of management activities. Operational funds are distributed to most effectively accomplish the management objectives of each management area.

## **7.2 Infrastructure**

*Policy 140-25(3)(k) Infrastructure support shall be developed and maintained to provide safe access for responsible management and public use on District lands. Such infrastructure may include access points, roads, trails, signs, utilities, and minimal public facilities.*

The development of adequate infrastructure for MA public use and management activities has received support from FWC, and the Kissimmee River Division of the District. Current MA infrastructure which requires regular maintenance includes 2 entrances, perimeter posting, firelines, hiking trails and roads, four kiosks, camp sites, and a law enforcement officer's house.

## **7.3 Personnel and Equipment**

The LSP is separated into five geographic regions, each staffed with professional land stewards directed by the supervising land manager. Highly trained land management technicians are based at the DuPuis Management Area, the West Coast Field Office, and at the Orlando, Okeechobee, and Miami Service Centers. The Land Stewardship Division director and additional planning staff are headquartered at the main West Palm Beach office.

Stewardship of the MA is the primary responsibility of the District's Kissimmee River/Okeechobee regional land manager and FWC. Additional management input and support comes from District planning and Field Station personnel, as well as the Kissimmee River Division. Staff has access to tools, supplies, four-wheel drive vehicles, fire suppression trucks, all terrain vehicles, swamp buggies, bull dozers, tractors, and other heavy equipment.

## **7.4 Volunteers and Alternative Work Force**

*Policy 140-25(5)(d)(1) Volunteers, interns and alternative work forces will be used when possible to supplement existing staff and services.*

Section 373.1391(3) F.S. encourages the District to use volunteers for land stewardship and other services. The District recognizes the merits of volunteerism and welcomes participation in activities appropriate for public involvement. The Florida Trail Association regularly provides volunteer service to maintain the portion of the Florida National Scenic Trail that passes through KICCO. Selection of appropriate management activities is at the discretion of the land steward and may fall under the general guidance of the supervising land steward. Volunteers have contributed many hours to MA maintenance and wildlife surveys. They have particularly been active in white-tailed deer surveys.

All volunteer activities help accomplish management objectives, promote citizen involvement, and allow area staff to focus on other tasks.

## **7.5 Contractual Management**

*Policy 140-25(5)(a). The private sector may be solicited to furnish certain management-related facilities and services through the execution of leases and agreements. These leases/agreements will assure mutual benefits to both the District and private parties and be consistent with the program management objectives.*

Effective operation and management of LSP properties requires the services and cooperation of private organizations, other governmental agencies, and volunteers. Contractual management is legalized through a management agreement signed by both the District and contracting entity with the document defining responsibilities of each party.

The District has established and maintains several contractual management agreements to assist with MA management:

### Agreement #1

C-13133 Grazing Lease with Alec Fulford

This lease allows cattle grazing in KICCO south of the resort. It is active until June, 2007.

### Agreement #2

C-12125

This is a contractual agreement that authorizes FWC to manage the Kissimmee River Public Use Area (PUA) that includes the Blanket Bay portion of Pool A.

### Agreement #3

C89-0065

A Memorandum of Understanding with the Florida Trail Association in which they agree to maintain the segment of the Florida National Scenic Trail that passes through the Kissimmee River Valley.

### Agreement #4

C91-2381

This is a contractual agreement that authorizes FWC to manage KICCO Wildlife Management Area, and the Hickory Hammock Management Area to the south.

## **7.6 Management Review**

Policy 140-22(j) Section 373.591, Florida Statutes, mandates the District to solicit input on current management programs through professional peer reviews.

...To be completed following the Management Review.

## **Appendix A**

### **Land Stewardship Program Goals and Policies**

#### **ARTICLE II. LAND STEWARDSHIP**

##### **Sec. 140-21. Scope.**

This policy shall apply to all lands managed by the Land Stewardship Program, including property acquired with Save Our Rivers, Preservation 2000 or mitigation funding. Nothing in this policy shall negate any statute, administrative rule, or other policy requirement. This policy may be reviewed and approved by the District Governing Board at five-year intervals or earlier and updated as required. Public comment may be solicited as part of the review process.

(R.M. No. 139)

##### **Sec. 140-22. Purpose.**

(a) This policy establishes a commitment to the responsible management of District lands in a manner consistent with legislative directives and the District's mission.

(b) In 1981, the Florida Legislature established the "Save Our Rivers" program (SOR) for the five water management Districts to acquire water resource lands. This legislation (Section 373.59, Florida Statutes) produced the Water Management Lands Trust Fund, empowering the water management Districts to acquire lands needed to protect, manage, and conserve the state's water resources. Preservation 2000 (P2000), enacted by the Legislature in 1990, also added land acquisition funds to the Save Our Rivers program. The 1999 Florida Forever Act consolidated the legislative directives of SOR/P2000 and expanded the funding to take over when P2000 terminates. The 1999 legislation authorized funds to be appropriated for acquisition, management, maintenance and capital improvements, including perimeter fencing, signs, control of invasive exotic species, controlled burning, habitat inventory and restoration, law enforcement, access roads and trails, and minimum public accommodations.

(c) Land acquired by the District's Save Our Rivers program and managed by the Land Stewardship program must satisfy several requirements set forth in Sections 373.139 and 373.1391, Florida Statutes. Section 373.139, Florida Statutes, declares it necessary for the public health and welfare that water and water-related resources be conserved and protected. The acquisition of real property for this objective shall constitute a public purpose for which public funds may be budgeted.

(d) Section 373.1391(1)(a), Florida Statutes, states that lands titled to the water management districts shall be managed and maintained to the extent practicable to ensure a balance between public access, general public recreational purposes, and restoration and protection of their natural state and condition.

(e) Section 373.1391(1)(b), Florida Statutes, states, in part, that "Whenever practicable, such lands shall be open to the general public for recreational uses. General public recreational uses shall include, but not be limited to, fishing,



hunting, horseback riding, swimming, camping, hiking, canoeing, boating, diving, birding, sailing, jogging, and other related outdoor activities to the maximum extent possible considering the environmental sensitivity and suitability of those lands."

(f) Section 373.1391(1)(d), Florida Statutes, states that the District shall first consider using soil and water conservation Districts to administer agricultural leases.

(g) Section 373.1391(3), Florida Statutes, encourages each District to use volunteers to provide land management and other services.

(h) Section 373.1391(4), Florida Statutes, encourages each District to enter into cooperative land management agreements with state agencies or local governments to provide the coordinated and cost-effective management of lands.

(i) Section 373.1391(5), Florida Statutes, authorizes water resource and supply projects, stormwater management projects, linear facilities, and sustainable agriculture and forestry where it is compatible with the natural resource values and the public interest and is consistent with the project management plan, the proposed use is appropriately located on the property and other lands have been considered, and the titleholder of the property has been properly compensated.

(j) Section 373.591, Florida Statutes, mandates the District to solicit input on current management programs through professional peer reviews.

(R.M. No. 139)

#### **Sec. 140-23. Statements of Policy.**

The Land Stewardship Program mission is to provide natural resource protection and management while allowing compatible multiple uses on designated public lands. The mission statement, together with requirements set forth in the Florida Statutes, provide three primary goals for the District Land Stewardship Program, each of which is linked to sections in this Land Stewardship Policy document:

- (1) Conservation and protection of water resources (section 140-25(1)).
- (2) Protection and/or restoration of land to its natural state and condition:
  - a. Restoration and Protection of Natural Communities (section 140-25(2)); and
  - b. Resource Operations and Maintenance (section 140-25(3)).
- (3) Provide public use (section 140-25(4)).

(R.M. No. 139)

#### **Sec. 140-24. Definitions.**

For the purpose of this article, the following words and terms shall have the meanings respectively ascribed:

*Archaeological/Historic Resources* means any prehistoric or historic district site, building, object, or property of historic, architectural, or archaeological value relating to the history, government, and culture of a historic or pre-historic people.

*Best Management Practice (BMP)* means the best available technology or process that is practical and achieves the desired goal or objective.

*Capital Improvement* means activities relating to the restoration, public access, recreational uses and necessary services for land and water areas, including the

initial removal of invasive plants, and the construction, improvement, enlargement or extension of facilities' signs, fire lines, access roads, and trails. Such activities shall be identified prior to the acquisition of a parcel or the approval of a project.

*Cooperating Agencies* means two or more agencies working together to operate a specific management area.

*Cooperative Management Agreement* means an agreement between two or more agencies outlining the respective duties and responsibilities of each agency in the management of a specific tract of land.

*Critical Habitat* means areas designated for the survival and recovery of state/federally listed rare, threatened, endangered or other sensitive species.

*Desirable Vegetation* means native plant species that are appropriate for a specific community type and provide benefits to wildlife in the form of food, cover and nesting.

*Habitat Diversity* means richness and variety of native plant communities within a particular area of the landscape.

*Hydroperiod* means flooding duration, depth, and timing that influences species composition, ecosystem structure and function.

*Interim Land Management* means management of non-natural areas that provides revenue without impacting long-term water-development projects.

*Invasive/Exotic Vegetation* means certain plants that displace native species and adversely affect wildlife habitat, water quality, recreation, and biological diversity.

*Lead Manager* means the prime managing entity designated for a given tract of land; generally provides the on-site staff.

*Management Area* means a single tract or combination of tracts under one management program.

*Mitigation* means, for purposes of this policy, the actual acquisition, restoration, creation, or enhancement of wetlands to compensate for permitted wetland impacts.

*Mitigation Banking* means wetland acquisition, restoration, creation or enhancement undertaken expressly to provide compensation in advance of wetland losses from development activities.

*Multiple-Use* means the management of renewable resources for a variety of purposes such as recreation, range, timber, wildlife habitat, and water resource development.

*Prescribed Fire* means burning of vegetative fuels using controlled application of fire within specified environmental conditions.

*Primary Resource Lands* means lands having high water resource, fish, wildlife, and recreational values requiring acquisition or protection.

*Regional Mitigation Area* means, for purposes of this policy, permitted wetland impacts offset through payment for the acquisition, restoration and perpetual management of a Save Our Rivers identified and duly noticed project.

*Responsible Management* means level of management described in the General Management Plan.

*Sustainable Use* means to provide continued use of a natural resource without degradation or loss of that resource.

*Water Resource Buffer* means that portion of a Preservation 2000 or Save Our Rivers project necessary to protect the aquatic environment.

*Wildlife Corridor* means a connection between natural areas that allows the safe movement of wildlife.

(R.M. No. 139)

**Cross references:** Definitions and rules of construction, § 100-2.

### **Sec. 140-25. Responsibilities.**

The Land Stewardship Program is responsible for:

**(1) Water Resource Protection.** The basis for the Land Stewardship Program is the protection and management of natural hydrologic resources. The following policies guide implementation of this objective:

a. Acquired lands shall be managed to provide water resource-related benefits.

b. Land uses or activities that significantly or permanently alter or degrade the quality, quantity and/or natural movement of ground or surface water are not allowed unless they are a part of a regional water management system.

c. Where feasible, an attempt shall be made to restore a more natural hydroperiod on tracts where the drainage patterns have been altered.

d. Public use shall not result in detrimental impacts to water resources. When a public use activity produces detrimental effects on water resources, it shall be discontinued until an evaluation determines that such use is compatible.

e. Water resource lands designated as necessary to implement the Central and Southern Florida "Restudy" Project shall, upon acquisition, become the responsibility of the (Interim) Land Management Program, and follow the guidelines set forth under Section 373.1391(5), Florida Statutes.

**(2) Restoration and Protection of Natural Communities:**

a. The Land Stewardship Program will encourage the acquisition of large or regionally significant areas that protect important natural resources and provide wildlife corridors.

b. Particular emphasis shall be placed on the identification, protection and management of rare, threatened and endangered species.

c. The planting of invasive exotic plant species shall be prohibited in all management areas. Management practices will strive to identify existing infestations and implement appropriate control or eradication measures.

d. Where practicable, an attempt shall be made to restore and maintain desirable vegetation to promote habitat diversity in areas where invasive exotic vegetation, grazing practices, or improved land uses have substantially altered the historic landscape.

**(3) Resource Operations and Maintenance:**

a. Lands acquired for natural and/or hydrologic resource benefits shall be managed to conserve and protect those resources.

b. Exotic plant control in all management areas shall strive to attain a level of success where periodic maintenance eliminates the infestation or reduces the coverage of exotic plants.

c. Prescribed fire will be a primary management tool on District lands and will be applied within fire-maintained communities at appropriate intervals.

d. The Division of Forestry will be notified of all wildfires on District lands. Land Stewardship will provide initial suppression when commensurate personnel and equipment are available.

e. Inventories of natural and historic resources shall be performed to provide information for effective land management planning, natural community maintenance and ecological restoration.

f. Evaluation and monitoring of management activities shall be conducted to improve program effectiveness and efficiency.

1. Research shall evaluate the environmental response of certain management activities to assist staff in making appropriate management decisions.

2. Monitoring shall be conducted to identify landscape changes resulting from management activities.

3. Legislative-mandated management reviews will provide input from professional peers.

g. Resource protection shall be provided by professional law enforcement services through funded and unfunded contractual agreements to safeguard the public and protect natural and cultural resources on District-managed natural areas.

h. Sustainable use of forest resources shall be conducted where these activities adhere to a series of environmental criteria (see 1999 Forest Management Plan) that meet Land Stewardship Program goals. Timber contractors will be required to meet silvicultural Best Management Practices (BMP) developed for Florida forests.

i. Range management (grazing) will be considered on improved or native ranges when the introduction of cattle will not conflict with other natural resource management and public use goals.

j. Archaeological and historic resources are protected by site identification and inter-agency coordination with the Florida Division of Historical Resources. Land stewardship planning shall include an analysis of archeological data accompanied by appropriate public education opportunities.

k. Infrastructure support shall be developed and maintained to provide safe access for responsible management and public use on District lands. Such infrastructure may include access points, roads, trails, signs, utilities, and minimal public facilities.

l. Mechanical equipment may be used in conjunction with prescribed burning and other management tools to control vegetation and restore habitat structure.

m. Agricultural developments previously existing on acquired natural areas may be maintained if management of these developments is consistent with other land stewardship goals.

**(4) Public Use and Environmental Education:**

a. Public use of management areas that is consistent with other management goals shall be encouraged. Public use that may have detrimental impacts on sensitive environmental resources shall be restricted until an evaluation determines such use is compatible. A public use compatibility assessment will be included in the General Management Plan completed for each management area and will be based on the following criteria:

1. Consistency with the reason the lands were acquired.
2. Restrictions and/or prohibitions imposed by easements, leases, reservations, adjacent land ownership, conditions of the purchase agreement, and any other agreements concerning the property.
3. Infrastructure and support facility requirements, such as fences, gates, signage, entry design, stabilized off-road parking, trails, campsites, maintenance, and other operational and budgetary impacts.
4. Opportunities for persons with disabilities.
5. Limitations resulting from endangered species, other sensitive natural resources, archaeological resources, or land management practices.
6. Public health, safety and welfare.
7. Environmental education program opportunities.

b. Public Use Regulation:

1. Public use regulations are set forth in 40E-7.511, Florida Administrative Code, to implement Section 373.1391(1)(b), Florida Statutes. Accordingly, the District shall publish and make available to the public a "Public Use Guide" for designated land management areas. The Public Use Guide will be adopted by the Governing Board at a public meeting advertised in accordance with Chapter 120, Florida Statutes.

2. Rules and regulations governing the public use of each management area shall be enforced by agencies with appropriate law enforcement jurisdiction.

3. Pursuant to Section 373.609, Florida Statutes, the District shall seek the cooperation of every state and county attorney, sheriff, police officer, and appropriate city and county official in the enforcement of the provisions set forth according to 40E-7.511, Florida Administrative Code.

4. Florida Fish and Wildlife Conservation Commission regulations shall govern hunting in areas opened for such use.

**(5) Implementation Strategies.** The District will secure dedicated funding sources, personnel and other resources to support program goals and objectives. Project funding needs and sources for cooperative management agreements with government and non-government entities will be identified during acquisition. A cooperative management agreement will designate a lead Manager and identify whether District funding is required.

a. The private sector may be solicited to furnish certain management-related facilities and services through the execution of leases and agreements. These leases/agreements will assure mutual benefits to both the District and private parties and be consistent with the program management objectives.



b. Mitigation:

1. Mitigation Banking: Mitigation banking provides an opportunity to accomplish large-scale restoration that may otherwise go unfunded. Pursuant to Section 373.4135, Florida Statutes, the District is encouraged to develop mitigation banks. Land managers will evaluate opportunities in their regions to implement mitigation banks that are consistent with the guidelines established in the Joint State and Federal Mitigation Bank Review Team Process for Florida.

2. Regional Mitigation Areas: The acquisition, restoration and management of District lands as mitigation shall be consistent with Chapter 2000-133, amending Sections 373.414 and 373.4135, Florida Statutes. This includes the establishment of Memorandums of Agreement (MOA) that include restoration plans, success criteria, and monitoring requirements. The MOAs will be used to implement mitigation using full-cost accounting, public noticing, and approval by the Governing Board for use as a mitigation area. The mitigation shall meet restoration objectives as provided in the General Management Plan.

c. Revenue Generation:

1. Private concessions and/or agreements with non-profit organizations will be considered to implement needed services through concession contracts.

2. Entrance and user fees, permits, licenses and/or advance reservations may be required where considered necessary by the managing agency.

3. Timber sales will be conducted to improve forest health or to support specific forest management goals.

4. Grazing leases will be encouraged on selected rangeland to generate revenue or to provide services that offset program management costs.

d. Volunteers and Interns:

1. Volunteers, interns and alternative work forces will be used when possible to supplement existing staff and services.

2. Any volunteer services must meet the standards and procedures prescribed by the District (Risk Management Manual, Volume 1).

**(6) Program Components:**

a. Management Assessment: A brief summary of the management issues completed when the site is identified for acquisition.

b. General Management Plan (GMP): Provides a description of recommended management and is required for each Land Stewardship Management Area. The GMP follows a designated format and is updated every five years.

c. Activity Plan (AP): Provides a detailed implementation strategy for specific activities such as prescribed burning, exotic removal and restoration. The plan shall be developed by the lead Manager in consultation with the cooperating agencies for each major tract of land (or group of tracts) to be operated as a single

management unit. The AP may be included in the GMP and is updated when necessary.

d. Annual Work Plan (AWP): Summarizes activities corresponding with annual budget development and is prepared by the Operations Section of the Land Stewardship Program.

e. Reporting: Summaries of management activities for each management area will be reported quarterly within the District and annually as part of the Florida Forever Work Plan.

(R.M. No. 139)

Secs. 140-26--140-40. Reserved.

## **Appendix B. Soil Descriptions**

### Flatwood Soils

Flatwood soils are poorly drained non-hydric, upland soils with sandy marine sediments throughout the profile. The seasonal high water table can range from six to 18 inches below the soil surface for three to six months annually. This soil type is dominant on the MA uplands and uplands throughout the basin.

### Flat Soils

Flat (previously referred to as slough) soils are poorly drained hydric soils with sandy marine sediments throughout the profile. Flats are located between the flatwoods and topographic depressions and are generally regarded as transition areas, e.g. a wet prairie or a slough. Generally, the seasonal high water table begins in June and ends from September or thereafter with inundation periods dependent upon seasonal rainfall or large storm events. Within the MA the tributary sloughs and many of the depression marsh communities are buffered by soils of this this classification.

### Sand Depression Soils

Sand depression soils are very poorly drained hydric soils that typically have sandy marine sediments throughout the profile. Often, these areas are depressions adjacent to flatwoods. The seasonal high water table can range from one foot below to two feet above the soil surface for seven to 10 months annually. Wetland communities dominate this landscape position. Within the MA, most of the outer floodplain represent this soil class.

### Muck Depression Soils

Muck depression soils are very poorly drained hydric soils that have an organic surface layer underlain by sandy marine sediments. These areas are often depressions adjacent to Flatwood soil-types. The seasonal high water table can range from six inches below to two feet above the soil surface for seven to eleven months annually. Wetland communities dominate this soil type. Examples within the MA include the inner river floodplain .

### Urban or Made Lands

Urban or made land areas have soils that have been altered, excavated, or disturbed and no longer possess their natural morphological features. These soils do not function as they did in their original state, and little information on this subject is available. The seasonal high water table varies by site and is usually controlled to inhibit flooding of developed areas. No ecological communities are representative of this landscape position. The spoil berms fall into this classification.

**Water Areas**

This classification represents areas that are permanently inundated, with depths usually two feet or more. No soil series or ecological community is associated with this classification. In the MA, the channelized Kissimmee River and the oxbows and main channel of the old river best represent this category.

## **Appendix C. FNAI Natural Communities**

### Xeric Hammock (5 acres)

Xeric hammock is characterized as either a scrubby, dense, low canopy forest with little understory other than palmetto, or a multi-storied forest of tall trees with an open or closed canopy (FNAI, 1990). Soils are deep, sandy and well drained, conditions expected of topography created by old dune systems. Typical canopy species in the Kissimmee River basin are live oak (*Quercus virginiana*), sand live oak (*Quercus geminata*), myrtle oak (*Quercus myrtifolia*) and Chapman oak (*Quercus chapmanii*). The understory is generally sparse due to dry soil conditions and overstory shading. Understory species include saw palmetto (*Serenoa repens*), bracken fern (*Pteridium aquilinum*), myrsine (*Rapanea punctata*), silk bay (*Persea borbonia* var. *humilis*), highbush blueberry (*Vaccinium corymbosum*) and Carolina jessamine (*Gelsemium sempervirens*). Wild pine (*Tillandsia balbisina*), and laurel greenbriar (*Smilax* sp.) are common arboreal species.

Xeric hammock is the climax successional stage of scrub or sandhill. Isolated remnant hammocks are the result of maturing scrub, protected from fire. Once established, xeric hammock resists burning by a lack of contiguous understory fuel and a duff layer of relatively incombustible oak leaves. When fire does occur within this community, it removes canopy, understory and ground cover biomass, reverting the area back to scrub. In the LSP management units, xeric hammock is commonly associated with scrub and prairie hammock, with similar species composition.

Xeric hammock is scarce, however, there is one classic example of this rare community located in the MA. Special care will be taken to avoid soil disturbance and protect this area from fire during prescribed fire applications to surrounding natural communities. Xeric hammock has a FNAI state ranking of “S3”, rare or uncommon in state. Due to its rarity, areas of xeric hammock will be identified and managed to ensure perpetuation of existing locations.

### Scrub (130 acres)

Scrub occurs in many forms, but is often characterized as a closed to open canopy forest of sand pines with dense clumps or vast thickets of scrub oaks and other shrubs dominating the under-story (FNAI, 1990). The latter is the structural form for much of the scrub within the MA. Typical plants include sand live oak, myrtle oak, Chapman's oak, scrub oak, saw palmetto, rosemary (*Ceratiola ericoides*), rusty lyonia (*Lyonia ferruginea*), stagger bush (*Lyonia lucida*), runner oak (*Quercus pumila*), and wiregrass.

Highest elevations in the basin support this community. All scrub locations have sandy, well-drained, loose and non-organic soils. In the MA, scrub is often associated with scrubby flatwoods, dry prairie, and in a few locations, xeric hammock.



Scrub is a fire dependent community. Fuel buildup is a lengthy process, as vegetation grows relatively slowly due to severe environmental conditions. With sufficient fuel, fire will burn with speed and intensity, returning nutrients to the soil and opening the canopy for light to reach ground layer species. Burns naturally occur once every 20 to 80 years. In an effort to maintain scrub sites, management practices include prescribed fire applied on a natural cycle for shrubby, oak-dominated scrub.

Scrub is being lost at an astounding rate throughout the state, as high elevations and fast drainage make this community highly desirable for development. This association occurs almost exclusively in Florida. State ranking of scrub is “S2”, imperiled in the state because of its rarity and vulnerability (FNAI 1990).

Prairie Hammock (452 acres)

Prairie hammock is characterized as a clump of tall cabbage palms and live oaks in the midst of prairie or marsh communities (FNAI, 1990). Prairie hammocks establish on elevated soils surrounded by lower topography. These islands are generally flooded only for a short duration during the highest water levels. Naturally occurring fires are rare in these hammocks, due mainly to a lack of under-story fuel.

Canopy species in the MA floodplain are live oak and cabbage palm, with occasional laurel oak in lower elevations. An abundance of epiphytes, including listed species, are found in mature canopy trees. As in most prairie hammocks, those of the MA have a sparse under-story due to over-story shading, but cover is also reduced by cattle grazing and trampling of shrub and ground layer vegetation. Many species common to undisturbed hammocks are sparse or lacking, replaced by disturbance species such as broomweed (*Sida sp.*), tropical soda apple (*Solanum viarum*), and caesarweed (*Urena lobata*). Typical under-story plants of pristine prairie hammocks include wax myrtle, water oak, stoppers (*Eugenia sp.*), marlberry (*Ardisia escallonioides*), beautyberry (*Callicarpa americana*), and saw palmetto.

FNAI ranks prairie hammocks as “G4” and “S4” both statewide and globally secure, although it may be quite rare in parts of its range, especially at the periphery. LSP management strives to minimize soil disturbance, restrict fire where appropriate and eradicate non-native invasive species within hammock areas.

Mesic Flatwoods (440 acres) Mesic flatwoods are characterized as an open canopy forest of sparse pine trees with little or no under-story but a dense ground cover of herbs and shrubs. Two common vegetation associations are longleaf pine/wiregrass/runner oak and slash pine/gallberry/saw palmetto. In the MA, slash pine dominates the over-story and gallberry (*Ilex glabra*), saw palmetto and fetterbush occur in the understory. Other typical plants include St. Johns-wort

(*Hypericum* sp.), dwarf huckleberry (*Gaylussacia dumosa*), staggerbush, blueberry (*Vaccinium* sp.), gopher apple (*Lycania michauxi*), tar flower, bog buttons (*Lachnocaulon* sp.), blackroot (*Pterocaulon pycnostachyum*), and yellow-eyed grass (*Xyris* sp.).

This community occurs on similar soils as dry prairies and wet flatwoods, with minor changes in topography determining community type. Acidic sands overlay hardpan that reduces water exchange between the soil surface and subsurface. Thus rainy seasons produces surface flooding, and dry seasons extreme drought, influencing vegetation species composition. Plants of this community have adapted to long intervals of inundation and desiccation, and acclimated to periodic fire.

Natural fires occur every one to eight years. Frequency of fire determines community type between dry prairie and mesic flatwoods, with longer fire intervals favoring mesic flatwoods.

#### Wet Flatwoods (403 acres)

Wet flatwoods are characterized as relatively open-canopy forests of scattered pine trees or cabbage palms with either a thick shrubby under-story and very sparse ground cover, or a sparse under-story and a dense ground cover of hydrophytic herbs and shrubs, with variations between these extremes (FNAI, 1990). Other plants associated with this habitat type in the MA include wax myrtle, saw palmetto, beakrush (*Rhynchospora* sp.), St. John's-wort (*Hypericum* sp.), and blue maidencane (*Amphicarpum muhlenburgianum*).

Wet flatwoods develop on poorly drained acidic, low nutrient sands underlain by hardpan. Surface water appears a minimum of one month per year. Natural fire frequency is considered to be three to 10 years. Frequent fire postpones hardwood succession and thins canopy trees, while promoting under-story growth and fire-adapted species.

State ranking is "S4", apparently secure in the state, although it may be rare in some parts of its state range. Global ranking requires further research. Most wet flatwoods are extremely vulnerable to hydrologic manipulation and exotic invasion.

#### Wet Prairie (1721 acres)

Wet prairie is characterized as a treeless plain with a sparse to dense ground cover of grasses, sedges, rushes, and herbs; including wiregrass, toothache grass (*Ctenium aromaticum*), maidencane (*Panicum hemotomon*), spikerush (*Eleocharis* sp.), and beakrush (*Rhynchospora* sp.). Other typical plants include hatpins (*Lachnocaulon* sp.), marsh pinks (*Rhexia* sp.), crownbeard (*Verbesina chapmanii*), sundews (*Drosera* sp.), tickseed (*Bidens* sp.), wax myrtle, St. John's-wort (*Hypericum* sp.), and Panicums (FNAI, 1990).

Wet prairies occur on low, flat, poorly drained terrain and are inundated from 50 to 100 days per year. Wet prairie species have adapted to long periods of drought conditions due to rainfall seasonality. Soils typically are sands with a major organic component. Fire plays an integral role in wet prairie ecology, and with sufficient fuel build-up, burns every two to four years. If deprived of fire, these grass-dominated flatlands succumb to shrub encroachment, and are especially vulnerable to wax myrtle infestations.

Wet prairie has a state ranking of “S4”, apparently secure in the state, although it may be rare in some parts of its state range. Global ranking requires further research.

#### Floodplain Swamp (178 acres)

Floodplain swamp occurs on flooded soils along river channels and in low spots and oxbows within river floodplains. Dominant trees are usually buttressed hydrophytic species such as cypress and tupelo. Floodplain swamps in the MA grade into baygalls, and often contain many of the same species, with only species dominance varying. Soils and hydroperiods determine species composition and community structure. Baygalls are generally characterized as densely forested, peat-filled seepage depressions, frequently located at the edges of the floodplain where high water tables maintain soil moisture. The MA swamps are dominated by a mixture of swamp bay (*Persea palustris*) and loblolly bay (*Gordonia lasianthus*), with scattered red maple (*Acer rubrum*), cypress (*Taxodium distichum*), laurel oak, and cabbage palm. Typical under-story species include lizard’s tail (*Saururus cernuus*), gallberry, wax myrtle laurel greenbrier (*Smilax laurifolia*), poison ivy (*Toxicodendron radicans*), chain fern (*Woodwardia virginiana*) and wild grape (*Vitis sp.*).

River swamps are characterized by surface flow early in the growing season and have both a short hydroperiod and a perceptible flow rate for at least part of each year. (Myers and Ewel, 1990). Naturally occurring fires are infrequent in floodplain swamps, due to the lack of dense understory fuels and slow peat accumulation. During periods of drought, fuel may dry out sufficiently to carry fire in backwater areas. Severe fire can destroy the peat layer and transform the baygall swamp into another community such as wet flatwoods or cypress swamp, depending on the depth of peat removal. To prevent peat fires in floodplain swamps, prescribed fire is applied to surrounding communities when soils within the floodplain are saturated.

Floodplain swamps are ranked statewide as “G4”, apparently secure statewide, though it may be quite rare in parts of its range, especially at the periphery. Global ranking requires further research.

#### Floodplain Marsh (4938 acres)

Floodplain marsh are wetlands of herbaceous vegetation and low shrubs that occur in river floodplains (FNAI, 1990). Typical emergent vegetation includes maidencane, buttonbush, sand cordgrass (*Spartina bakeri*), dotted smartweed (*Polygonum punctatum*), arrowheads (*Sagittaria sp.*), pickerelweed (*Pontedaria cordata*), spikerush, bulrush (*Scirpus sp.*), tickseed (*Coreopsis sp.*), and water primrose (*Ludwigia sp.*).

Floodplain marshes depend on periodic fire to reduce shrub dominance, and maintain species diversity and herbaceous openings. Natural fires have historically occurred every one to five years, depending on the density of fuel available (FNAI, 1990). Summer lightning-initiated burns consumed above-water vegetation but preserved the floodplain's thick peat accumulation. Long-term fire exclusion favors floodplain marsh succession to a bog.

Floodplain marsh has a state ranking of "S2", imperiled because of rarity, or little remaining area, or because of some factors making it very vulnerable to extinction throughout its range. Further research is required to determine global ranking. The principle cause of ecological degradation of Florida's marshes has been dewatering (Myers and Ewel, 1990).

#### Floodplain Forest (182 acres)

Floodplain forests are hardwood forests that occur on drier soils at slightly higher elevations within floodplains, such as on levees, ridges and terraces, and are usually flooded for a portion of the growing season. The dominant trees in south Florida include oaks and cypress. The MA floodplain forests include red maple, laurel oak, bald cypress, cabbage palm, red maple, strangler fig (*Ficus aurea*), red, sweet bay (*Magnolia virginiana*), wax myrtle, myrsine (*Rapanea punctata*), buttonbush, poison ivy, leather fern (*Acrostichum danaeifolium*), sawgrass, royal fern (*Osmunda regalis*) and lizard's tail (*Saururus cernuus*).

Hydroperiod is the most important factor influencing floodplain forests, which are inundated by floodwaters nearly every year up to 60% of the growing season. The organic material accumulating on the forest floor is redistributed in the floodplain during floods. Floodplain forests usually do not have standing water in the dry season. Floodplain forests are often associated with, and grade into, floodplain swamp or baygall. Species composition is frequently similar to that of hydric hammock communities.

Natural fires are infrequent in floodplain forests due to the lack of dense understory fuels and slow peat accumulation. During periods of drought, floodplain fuels may dry sufficiently to carry fire. Normally, light surface fires burn into the younger fringe from neighboring communities, but seldom reach the largest trees in the deepest portion of the forest. The LSP regulates fire schedules to insure floodplain forests burn at natural frequencies and during periods of adequate ground moisture.

Maintenance of natural hydrologic regimes is critical to floodplain forest health. Species composition and the functional relationships throughout a river system are negatively impacted by hydrological alterations such as artificial impoundments, river diversion projects, pesticide use, forest clear cutting or intensive agriculture (FNAI 1990).

Floodplain forests have a state ranking of “S3”, rare or uncommon in the state. Further research is required for a definitive global classification.

Depression Marsh (166 acres)

Depression marsh, also known as a flatwoods pond, is characterized as a shallow, usually rounded depression in sand substrate with herbaceous vegetation often occurring in concentric bands (FNAI 1990). Typical plants include St. John's-wort, spikerush (*Eleocharis sp.*), yellow-eyed grass, chain fern, primrose willow (*Ludwigia peruviana*), maidencane (*Panicum hemitomon*), wax myrtle, buttonbush, pickerelweed, arrowhead, and bladderwort.

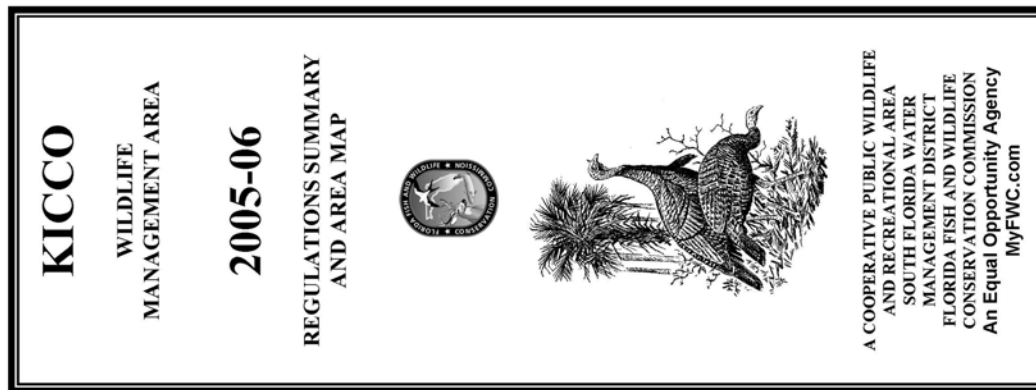
Where marshes occur, one of three geological conditions is present: surficial deposits are impermeable, the water table emerges through the permeable substrate, or the marsh is hydrologically connected to a river (Kushlan, 1991). Depression marshes are typically small in size and hydrologically isolated from other surface water bodies. Water is received by runoff, seepage or direct rainfall. Hydroperiods range widely from as few as 50 days or less to more than 200 days per year (FNAI, 1990). Bottom soils are generally acidic peat, resulting from accumulation of decayed plant material. This community frequently grades into wet or mesic flatwoods.

Natural fire occurs in depression marshes every one to five years, depending on a combination of weather conditions and fuel build-up. Fire preserves the open canopy by limiting invasion of woody vegetation, promoting herbaceous growth, and slowing succession by deepening the marsh with an occasional peat fire. The LSP coordinates fire schedules to insure depression marshes burn at natural frequencies and during periods of adequate ground moisture.

Depression marshes provide critical breeding and foraging habitat for a wide assemblage of amphibians and reptiles not found in larger, more permanent systems. Cyclic surface water availability promotes foraging by numerous listed wading bird species such as the wood stork, white ibis, snowy egret, and sandhill crane.

Depression marsh is ranked statewide as “S”, either very rare throughout its range; or found locally, even abundantly at some of its locations in a restricted range; or because of other factors making it vulnerable to extinction throughout its range. Global ranking indicates it is apparently secure, though it may be quite rare in parts of its range, especially at the periphery. Further research is required for a definitive global classification.

## Appendix D. KICCO and Blanket Bay Hunting Program



This brochure is designed to provide the public with information and a summary of regulations pertaining to hunting and other recreational use on the KICCO Wildlife Management Area. **Regulations that are new or differ substantially from last year are shown in bold print.** Area users should familiarize themselves with all regulations. For exact wording of the wildlife laws and regulations, see the Florida Fish and Wildlife Conservation Commission's wildlife code, on file with the Secretary of State and state libraries. This brochure, the Florida Hunting Regulations handbook, and quota permit application forms should provide the information necessary for you to plan your hunting activities. These publications are available from any Commission office, county tax collector and at [MyFWC.com](http://MyFWC.com).

Persons using wildlife management areas are required to have appropriate licenses, permits and stamps and display them upon request of any Commission employee. The following persons are exempt from all license and permit requirements (except for quota permits when listed as "no exemptions", recreational use permits and the Migratory Bird Hunting and Conservation Stamp [federal duck stamp]). Florida residents who are 65 years of age or older; residents who possess a Florida Resident Disabled Person Hunting and Fishing Certificate; residents in the U.S. Armed Forces, not stationed in Florida, while home on leave for 30 days or less, upon submission of orders; and children under 16 years of age. Children under 16 years of age are exempt from the federal duck stamp.

Hunting, trapping and fishing licenses, and wildlife management area, archery, muzzleloading gun, wild turkey and state waterfowl permits may be purchased from county tax collectors, license agents, the Internet at [MyFWC.com/license](http://MyFWC.com/license) or by telephone at 1-888-486-8356. A no-cost Migratory Bird Permit is available when purchasing a hunting license. Any waterfowl hunter 16 years of age or older must possess a federal duck stamp; available at most post offices or at [duckstamp.com](http://duckstamp.com).

### QUOTA PERMIT INFORMATION:

**Archery** - 25, no-cost, special quota permits (no exemptions) for each of 5 hunts.

**Muzzleloading Gun** - 15, no-cost, special quota permits (no exemptions) for each of 2 hunts.

**General Gun Hog** - 20, no-cost, regular quota permits (no exemptions) for each of 5 hunts.

**Spring Turkey** - 15, no-cost, spring turkey quota permits (no exemptions) for each of 5 hunts.

Permit applications: **Hunters must submit electronic applications for quota and special-opportunity permits at a license agent, county tax collector's office or online at [MyFWC.com](http://MyFWC.com). Only the Recreational Use application is to be mailed to Tallahassee.** Most quota hunt permits are issued during a random drawing, which includes all applications submitted during the times and dates listed below. Any remaining permits are issued first-come, first-served. A limited number of antlerless permits may be available for selected Wildlife Management Areas. **Refer to the quota or special-opportunity permit summary for information regarding the issuance of those permits.**

A list of available permits may be obtained 1 - 2 weeks before each application period from FWC offices, tax collectors, license agents and online at [MyFWC.com](http://MyFWC.com). Application for random drawings begins 10:00 a.m. eastern time on the first day of the application period and ends midnight eastern time on the last day. **Regular and Special** quota permit applications may be submitted June 1 - 11. **Spring Turkey** quota permit applications may be submitted November 2 - 11.

Transfer of permits: Quota and antlerless deer permits are transferable, except that any exempt permit is transferable only to another exempt person. The sale or purchase of any quota hunt permit or antlerless deer permit is prohibited.

### GENERAL WILDLIFE MANAGEMENT AREA REGULATIONS:

All general laws and regulations relating to wild animal life or freshwater aquatic life shall apply unless specifically exempted for this area. Hunting or the taking of wildlife or fish on this area shall be allowed only during the open seasons, and in accordance with the following regulations.

1. Any person hunting deer or accompanying another person hunting deer shall wear at least 500 square inches of daylight fluorescent-orange material as an outer garment, above the waistline. This is not required during an archery-only season.
2. Taking of spotted fawn, swimming deer or roosted turkey is prohibited. Species legal to take are listed under each season.
3. It is illegal to hunt over bait or place any bait or other food for wildlife on this area.
4. Driving a metal object into any tree, or hunting from a tree into which a metal object has been driven, is prohibited.
5. No person shall cut, damage, or remove any natural, man-made or cultural resource without written authorization of the landowner or primary land manager.



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6. Taking or attempting to take any game with the aid of live decoys, recorded game calls or sounds, set guns, artificial light, net, trap, snare, drug or poison is prohibited.
7. The wanton and willful waste of wildlife is prohibited.
8. Hunting, fishing or trapping is prohibited on any portion of the area posted as "CLOSED" to those activities.
9. People, dogs, vehicles and other recreational equipment are prohibited in areas posted as "Closed to Public Access" by FWC administrative action.
10. Taking or herding wildlife from any motorized vehicle, aircraft or boat which is under power is prohibited, until power and movement from that power, has ceased.
11. Most game may be hunted from one-half hour before sunrise until one-half hour after sunset (see exceptions under each season).
12. The release of any animal is prohibited, without written authorization of the landowner or primary land manager.
13. The head and evidence of sex may not be removed from the carcass of any deer or turkey on the area.
14. The planting or introduction of any non-native plant is prohibited, without written authorization of the landowner or primary land manager.
15. Wild hogs may not be transported alive.
16. It is unlawful for any person to leave any garbage or refuse, or in any way litter in the area.
17. It is unlawful to set fire to any forest, grass or woodlands.
18. A Fish and Wildlife Conservation Commission Law Enforcement Officer may search any camp, vehicle or boat, in accordance with law.

**AREA SPECIFIC REGULATIONS:**

1. Fires other than campfires at designated campsites are prohibited.
2. The portion of the area north and east of River Ranch Road shall be open to hunting only during the General Gun Hog season.
3. Additional hog management hunts may be conducted on this area. Refer to KICCO Public Small Game Hunting Area brochure for additional information.

**PUBLIC ACCESS AND VEHICLES:**

1. Open to public access year-round.
2. Hunters in possession of a valid quota permit may operate motor vehicles on named or numbered roads during the Archery, Muzzleloading Gun, General Gun Hog and Spring Turkey season.
3. **Vehicular access is prohibited from 1.5 hours after sunset until 1.5 hours before sunrise.**
4. Vehicles must be parked in designated parking areas.
5. No motor vehicle shall be operated on any part of any wildlife management area that has been designated as closed to vehicular traffic.
6. The use of tracked vehicles, all-terrain vehicles, motorcycles or airboats is prohibited.
7. Horses are prohibited except by written permission from the South Florida Water Management District, 800-250-4200.
8. A public boat ramp is located just south of S.R. 60 at Structure 65 (Spillway and Navigational Lock).
9. A marked footpath called the Florida Trail traverses the area. This trail is open to hikers throughout the year.

**HUNTERS AND CHECK STATIONS:**

1. Hunting equipment and dogs may be taken onto the WMA after 8 a.m. the day before the opening of a season and shall be removed by 6 p.m. one day after the end of the season.
2. Hunters shall check in or out at a designated check station when entering or exiting the area, and shall check all game taken.
3. No deer, wild hog or turkey shall be dismembered until checked at a designated check station.
4. Check station hours are 5 a.m. to 9 p.m. during Eastern Daylight Savings Time and 4 a.m. to 8 p.m. during Eastern Standard Time, except during the Spring Turkey season when hours are 5 a.m. to 2 p.m. and the General Gun Hog season when hours are 5 a.m. to 8 p.m.

**GUNS:**

1. Possession of centerfire or rimfire rifles or pistols is prohibited.
2. Possession of a gun is allowed only during periods when hunting with a gun is permitted.
3. Hunting with a gun and light is prohibited.
4. Muzzleloading guns used for taking deer must fire a .40 caliber or larger bullet, or be 20 gauge or larger if firing two or more balls.
5. Possession of a loaded, capped or primed firearm, or discharge of a firearm on, from or across any campsite or check station is prohibited.
6. Children under the age of 16 may not be in possession of a firearm unless in the presence of a supervising adult.
7. No person shall have a gun under his control while under the influence of alcohol or drugs.
8. For taking non-migratory game, only shotguns, longbows (including compound and recurve bows), crossbows (during the general gun season or by permit only) or falconry may be used.
9. For taking migratory game, only shotguns, bow and arrow (not crossbows), and falconry may be used. Shotguns shall not be larger than 10 gauge and shall be incapable of holding more than three shells in the magazine and chamber combined.
10. Firearms using rimfire or non-expanding, full metal jacket (military ball) ammunition are prohibited for taking deer.
11. Fully automatic or silencer-equipped firearms, centerfire semi-automatic rifles having a magazine capable of holding more than five rounds, explosive or drug-injecting devices and setguns are prohibited.

**DOGS:**

1. Hunting deer with dogs is prohibited.
2. Hunting with dogs is prohibited, except bird dogs, retrievers or dogs with a shoulder height of 15 inches or less are permitted during the Small Game season.
3. No person shall allow any dog to pursue or molest any wildlife during any period in which the taking of wildlife by the use of dogs is prohibited.
4. Dogs on leashes may be used for trailing wounded game.
5. For purposes other than hunting, dogs are allowed, but must be kept under physical restraint at all times.

**CAMPING:**

1. **Prohibited except at designated hunt campsites during periods when hunting is allowed or by persons possessing a special use-license issued by the South Florida Water Management District, 800-250-4200.**
2. Camping equipment may be taken onto the WMA after 8 a.m. the day before the opening of a season and shall be removed by 6 p.m. one day after the end of the season.
3. **Only tents may be used for camping at designated hunt campsites.**

**BAG AND POSSESSION LIMITS:**

1. Deer - Daily limit 2, possession limit 4.
2. Wild hog - No size or bag limit.
3. Turkey - One per quota permit, daily limit 1, season limit 2, possession limit 2.
4. Gray squirrel, quail and rabbit - Daily limit 12, possession limit 24 for each game species.
5. Raccoon, opossum, armadillo, beaver, coyote, skunk and nutria - No bag limits.
6. Bobcat and otter - Prohibited.
7. Migratory birds - See Migratory Bird Hunting Regulations pamphlet.

**ARCHERY:**

September 24 through October 23 (Saturdays and Sundays only).  
Permit, Stamp and License Requirements - Quota permit, hunting license, wildlife management area permit, archery permit, wild turkey permit (if hunting wild turkeys), migratory bird permit (if hunting migratory birds), and state waterfowl permit and federal duck stamp (if hunting waterfowl).

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**Legal to Take** - Any deer (except spotted fawn), wild hog, turkey of either sex, gray squirrel, quail, rabbit, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria and migratory birds in season.

**Regulations Unique to the Archery Season** - In addition to these regulations, all General Wildlife Management Area Regulations shall apply. Possession of firearms or crossbows is prohibited, except that centerfire shotguns are permitted for hunting migratory birds when one or more species are legal to take (see Migratory Bird section and the current Migratory Bird Hunting Regulations pamphlet).

#### **MUZZLELOADING GUN:**

**October 29 through November 6** (Saturdays and Sundays only).

**Permit, Stamp and License Requirements** - Quota permit, hunting license, wildlife management area permit, muzzleloading gun permit and migratory bird permit (if hunting migratory birds).

**Legal to Take** - Deer with at least one antler 5 inches or more in length, wild hog, gray squirrel, quail, rabbit, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria and migratory birds in season.

**Regulations Unique to the Muzzleloading Gun Season** - In addition to these regulations, all General Wildlife Management Area Regulations shall apply. Only muzzleloading guns are allowed, except that centerfire shotguns are permitted for hunting migratory birds when one or more species are legal to take (see Migratory Bird section and the current Migratory Bird Hunting Regulations pamphlet).

#### **GENERAL GUN HOG:**

**November 12 through December 11** (Saturdays and Sundays only).

**Permit, Stamp and License Requirements** - Quota permit, hunting license and wildlife management area permit.

**Legal to Take** - Wild hog.

**Regulations Unique to the General Gun Hog Season** - In addition to these regulations, all General Wildlife Management Area Regulations shall apply. Possession of centerfire or rimfire rifles or pistols is prohibited.

#### **SMALL GAME:**

**December 17 through January 8.**

**Permit, Stamp and License Requirements** - Hunting license, wildlife management area permit, migratory bird permit (if hunting migratory birds), and state waterfowl permit and federal duck stamp (if hunting waterfowl).

**Legal to Take** - Gray squirrel, quail, rabbit, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria and migratory birds in season.

**Regulations Unique to the Small Game Season** - In addition to these regulations, all General Wildlife Management Area Regulations shall apply.

1. Hunting with bird dogs, retrievers or dogs with a shoulder height of 15 inches or less is permitted.
2. Possession of centerfire or rimfire rifles or pistols is prohibited.

**TRAPPING:** Prohibited.

#### **SPRING TURKEY:**

**March 18 through April 16** (Saturdays and Sundays only).

**Permit, Stamp and License Requirements** - Quota permit, hunting license, wildlife management area permit and wild turkey permit.

**Legal to Take** - Bearded turkey or gobbler.

**Regulations Unique to the Spring Turkey Season** - In addition to these regulations, all General Wildlife Management Regulations shall apply.

1. Possession of centerfire or rimfire rifles or pistols is prohibited.
2. Legal shooting hours are one-half hour before sunrise until 1 p.m.
3. The taking of any other animal is prohibited.

#### **MIGRATORY BIRDS:**

Rails, common moorhens, mourning doves, white-winged doves, snipe, ducks, coots, woodcock and crows may be hunted during seasons established by the Commission for these species that coincide with the archery, muzzleloading gun or small game season.

**Permit, Stamp and License Requirements** - Quota permit (if hunting during any quota period), hunting license, wildlife management area permit, migratory bird permit, and state waterfowl permit and federal duck stamp (if hunting waterfowl).

**Legal to Take** - See Migratory Bird Hunting Regulations pamphlet.

**Regulations Unique to Migratory Birds** - In addition to these regulations, all General Wildlife Management Regulations shall apply.

1. The use of lead shot for taking ducks and coots is prohibited.
2. Centerfire shotguns are permitted during established area seasons when one or more migratory birds are legal to take, except when prohibited by specific area rule.

#### **FISHING AND FROGGING:**

**Permitted year-round.**

**Permit, Stamp and License Requirements** - Fishing license (not required when frogging).

**Legal to Take** - See Florida Freshwater Fishing Regulations Summary.

**Regulations Unique to Fishing and Frogging** - All General Wildlife Management Area Regulations and General Freshwater Fishing Regulations shall apply. Possession of guns is permitted only during periods when hunting is allowed.

#### **GENERAL INFORMATION:**

1. Anyone born on or after June 1, 1975 must have passed a Commission-approved hunter-safety course prior to being issued a hunting license.
2. If you have any questions about this material, please call the Fish and Wildlife Conservation Commission at 863-648-3203 (TDD 800-955-8771).

#### **SOUTH FLORIDA WMD RULES AND INFORMATION:**

1. This land was acquired under the Save Our Rivers (SOR) Program. The purpose of SOR is to conserve and protect unique and irreplaceable lands, restore areas to their original condition as much as possible, and allow controlled multiple recreational and educational uses consistent with this purpose.

#### **COOPERATION REQUESTED:**

*If you see law violators or suspicious activities, contact your nearest Commission regional office or call 1-888-404-FWCC. You may qualify for a cash reward from the Wildlife Alert Reward Association.*

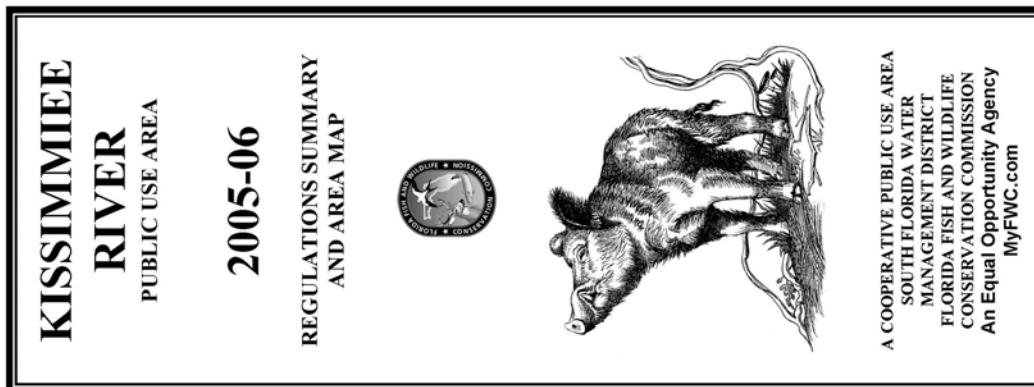
*Please do not drive vehicles from sunrise to 9 a.m. during the Archery, Muzzleloading Gun, General Gun Hog and Spring Turkey seasons.*

*The U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, age, sex or handicap. If you believe that you have been discriminated against in any program, activity or facility as described above, or if you desire further information, please write to: The Office for Human Resources, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240. The project described in this publication is part of a program funded by federal dollars under the Wildlife Restoration Act. Federal funds pay \$2,357,686 or 20 percent of the cost of the program.*



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This brochure is designed to provide the public with information and a summary of regulations pertaining to hunting and other recreational use on the Kissimmee River Public Use Area. **Regulations that are new or differ substantially from last year are shown in bold print.** Area users should familiarize themselves with all regulations. For exact wording of the wildlife laws and regulations, see the Florida Fish and Wildlife Conservation Commission's wildlife code, on file with the Secretary of State and state libraries. This brochure, the Florida Hunting Regulations handbook, and quota permit application forms should provide the information necessary for you to plan your hunting activities. These publications are available from any Commission office, county tax collector and at [MyFWC.com](http://MyFWC.com).

Persons using wildlife management areas are required to have appropriate licenses, permits and stamps and display them upon request of any Commission employee. The following persons are exempt from all license and permit requirements (except for quota permits when listed as "no exemptions", recreational use permits and the Migratory Bird Hunting and Conservation Stamp [federal duck stamp]). Florida residents who are 65 years of age or older; residents who possess a Florida Resident Disabled Person Hunting and Fishing Certificate; residents in the U.S. Armed Forces, not stationed in Florida, while home on leave for 30 days or less, upon submission of orders; and children under 16 years of age. Children under 16 years of age are exempt from the federal duck stamp.

Hunting, trapping and fishing licenses, and wildlife management area, archery, muzzleloading gun, wild turkey and state waterfowl permits may be purchased from county tax collectors, license agents, the Internet at [MyFWC.com/license](http://MyFWC.com/license) or by telephone at 1-888-486-8356. A no-cost Migratory Bird Permit is available when purchasing a hunting license. Any waterfowl hunter 16 years of age or older must possess a federal duck stamp; available at most post offices or at [duckstamp.com](http://duckstamp.com).

**QUOTA PERMIT INFORMATION:**  
Quota permits are not required for this area.

**GENERAL PUBLIC USE AREA REGULATIONS:**  
All general laws and regulations relating to wild animal life or freshwater aquatic life shall apply unless specifically exempted for this area. Hunting or the taking of wildlife or fish on this area shall be allowed only during the open seasons, and in accordance with the following regulations.

1. Any person hunting deer or accompanying another person hunting deer shall wear at least 500 square inches of daylight fluorescent-

orange material as an outer garment, above the waistline. This is not required during an archery-only season.

2. Taking of spotted fawn, swimming deer or roosted turkey is prohibited. Species legal to take are listed under each season.
3. It is illegal to hunt over bait or place any bait or other food for wildlife on this area.
4. Driving a metal object into any tree, or hunting from a tree into which a metal object has been driven, is prohibited.
5. No person shall cut, damage, or remove any natural, man-made or cultural resource without written authorization of the landowner or primary land manager.
6. Taking or attempting to take any game with the aid of live decoys, recorded game calls or sounds, set guns, artificial light, net, trap, snare, drug or poison is prohibited.
7. The wanton and willful waste of wildlife is prohibited.
8. Hunting, fishing or trapping is prohibited on any portion of the area posted as "CLOSED" to those activities.
9. People, dogs, vehicles and other recreational equipment are prohibited in areas posted as "Closed to Public Access" by FWC administrative action.
10. Taking or herding wildlife from any motorized vehicle, aircraft or boat which is under power is prohibited, until power and movement from that power, has ceased.
11. Most game may be hunted from one-half hour before sunrise until one-half hour after sunset (see exceptions under each season).
12. The release of any animal is prohibited, without written authorization of the landowner or primary land manager.
13. The head and evidence of sex may not be removed from the carcass of any deer or turkey on the area.
14. The planting or introduction of any non-native plant is prohibited, without written authorization of the landowner or primary land manager.
15. Wild hogs may not be transported alive.
16. It is unlawful for any person to leave any garbage or refuse, or in any way litter in the area.
17. It is unlawful to set fire to any forest, grass or woodlands.
18. A Fish and Wildlife Conservation Commission Law Enforcement Officer may search any camp, vehicle or boat, in accordance with law.

**AREA SPECIFIC REGULATIONS:**

1. Hunting is prohibited within 300 yards of any active construction site.
2. Antlerless deer may only be taken during the eighth and ninth day of general gun season.

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#### **PUBLIC ACCESS AND VEHICLES:**

1. Open to public access year-round.
2. Access is authorized only from the Florida National Scenic Trail, the Kissimmee River, the Istokpoga Canal, The C-38 Canal, the C-41 Canal and at designated entry points
3. Vehicles other than airboats may only be operated only on designated roads.
4. Parked vehicles may not obstruct a road, gate or firelane.
5. No motor vehicle shall be operated on any part of any wildlife management area that has been designated as closed to vehicular traffic.
6. The use of airboats is prohibited in those areas posted as closed to airboat use.
7. The use of tracked vehicles, swamp buggies, all-terrain vehicles and other types of off-road vehicles is prohibited
8. The possession of horses or bicycles is permitted only with a Special Use License from the South Florida Water Management District, 800-250-4200.
9. A marked footpath called the Florida Trail traverses the area. This trail is open to hikers throughout the year.

#### **HUNTERS AND CHECK STATIONS:**

1. Hunting equipment and dogs may be taken onto the PUA after 8 a.m. the day before the opening of a season and shall be removed by 6 p.m. one day after the end of the season.

#### **GUNS:**

1. Possession of centerfire rifles is prohibited.
2. The possession of guns is prohibited outside of the Kissimmee River Channel, the C-38 Canal and the Istokpoga Canal except from the beginning of rail season through the end of the spring turkey season.
3. In the Starvation Slough Hunt Area only bows may be used during archery and general gun seasons, and only muzzleloading guns may be used during muzzleloading gun season. Only bows and muzzleloading guns are permitted during spring turkey season.
4. The possession of guns is prohibited in the northern portion of Bluff Hammock posted as closed to the possession of guns.
5. Hunting with a gun and light is prohibited.
6. Muzzleloading guns used for taking deer must fire a .40 caliber or larger bullet, or be 20 gauge or larger if firing two or more balls.
7. Possession of a loaded, capped or primed firearm, or discharge of a firearm on, from or across any campsite or check station is prohibited.
8. Children under the age of 16 may not be in possession of a firearm unless in the presence of a supervising adult.
9. No person shall have a gun under his control while under the influence of alcohol or drugs.
10. For taking non-migratory game, only shotguns, rifles (rimfire only), pistols, longbows (including compound and recurve bows), crossbows (during the general gun season or by permit only) or falconry may be used.
11. For taking migratory game, only shotguns, bow and arrow (not crossbows), and falconry may be used. Shotguns shall not be larger than 10 gauge and shall be incapable of holding more than three shells in the magazine and chamber combined.
12. Firearms using rimfire or non-expanding, full metal jacket (military ball) ammunition are prohibited for taking deer.
13. Fully automatic or silencer-equipped firearms, centerfire semi-automatic rifles having a magazine capable of holding more than five rounds, explosive or drug-injecting devices and setguns are prohibited.

#### **DOGS:**

1. Hunting deer with dogs is allowed during General Gun season.
2. Hunting deer or wild hogs with dogs is prohibited during the Archery and Muzzleloading Gun seasons.
3. No person shall allow any dog to pursue or molest any wildlife during any period in which the taking of wildlife by the use of dogs is prohibited.
4. Dogs on leashes may be used for trailing wounded game.

5. For purposes other than hunting, dogs are allowed, but must be kept under physical restraint at all times.

#### **CAMPING:**

1. Camping is permitted by persons possessing a Special-Use License issued by the South Florida Water Management District, 800-250-4200.

#### **BAG AND POSSESSION LIMITS:**

1. Deer - Possession limit 4, daily bag as follows:
  - A. Two antlerless deer, or 2 antlered deer, or 1 antlered and 1 antlerless deer during the Archery season.
  - B. Two antlered deer during the Muzzleloading Gun or General Gun seasons.
  - C. One antlered and 1 antlerless deer, or 2 antlered deer on the eight and ninth day of General Gun season.
2. Wild hog - No size or bag limit.
3. Turkey - Daily limit 1, spring season limit 2, all fall seasons limit 2, possession limit 2.
4. Gray squirrel, quail and rabbit - Daily limit 12, possession limit 24 for each game species.
5. Raccoon, opossum, armadillo, beaver, coyote, skunk and nutria - No bag limits.
6. Bobcat and otter - Possession limit 1 unless in possession of a Trapping License.
7. Migratory birds - See Migratory Bird Hunting Regulations pamphlet.

#### **ARCHERY:**

Central Zone - September 24 through October 23.

South Zone - September 10 through October 9.

Permit, Stamp and License Requirements - Hunting license, archery permit, wild turkey permit (if hunting wild turkeys), migratory bird permit (if hunting migratory birds), and state waterfowl permit and federal duck stamp (if hunting waterfowl).

Legal to Take - Any deer (except spotted fawn), wild hog, bearded turkey or gobbler, gray squirrel, quail, rabbit, armadillo and migratory birds in season.

Regulations Unique to the Archery Season - In addition to these regulations, all General Wildlife Management Area Regulations shall apply. Possession of firearms or crossbows is prohibited, except that centerfire shotguns are permitted for hunting migratory birds when one or more species are legal to take (see Migratory Bird section and the current Migratory Bird Hunting Regulations pamphlet).

#### **MUZZLELOADING GUN:**

Central Zone - October 29 through November 6.

South Zone - October 15 - 24.

Permit, Stamp and License Requirements - Hunting license, muzzleloading gun permit, wild turkey permit (if hunting wild turkeys) and migratory bird permit (if hunting migratory birds).

Legal to Take - Deer with at least one antler 5 inches or more in length, wild hog, bearded turkey or gobbler, gray squirrel, quail, rabbit, armadillo and migratory birds in season.

Regulations Unique to the Muzzleloading Gun Season - In addition to these regulations, all General Wildlife Management Area Regulations shall apply. Only muzzleloading guns are allowed, except that centerfire shotguns are permitted for hunting migratory birds when one or more species are legal to take (see Migratory Bird section and the current Migratory Bird Hunting Regulations pamphlet).

#### **GENERAL GUN:**

Central Zone - November 12 through January 22 (Antlerless deer - November 19 - 20 only).

South Zone - October 29 through January 8 (Antlerless deer - November 5 - 6 only).

Permit, Stamp and License Requirements - Hunting license, wild turkey permit, migratory bird permit (if hunting migratory birds), and state waterfowl permit and federal duck stamp (if hunting waterfowl).

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**Legal to Take** - Deer with at least one antler 5 inches or more in length, antlerless deer (which includes does and bucks with antlers less than 5 inches in length, but NOT spotted fawns) wild hog, bearded turkey or gobbler (November 12 through January 8 only), gray squirrel, quail, rabbit, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria and migratory birds in season. Bobcat and otter beginning December 1 until the end of the zonal season.

**Regulations Unique to the General Gun Season** - In addition to these regulations, all General Wildlife Management Area Regulations shall apply.

1. Hunting with dogs is permitted.
2. Possession of centerfire rifles is prohibited.
3. Only bows may be used in the Starvation Slough Hunt Area.

#### **SMALL GAME:**

**November 12 through March 5.**

**Permit, Stamp and License Requirements** - Hunting license, migratory bird permit (if hunting migratory birds), and state waterfowl permit and federal duck stamp (if hunting waterfowl).

**Legal to Take** - Gray squirrel, quail, rabbit, armadillo, and migratory birds in season.

**Regulations Unique to the Small Game Season** - In addition to these regulations, all General Wildlife Management Area Regulations shall apply.

1. Hunting with dogs is permitted.
2. Possession of centerfire rifles is prohibited.
3. Only bows may be used in the Starvation Slough Hunt Area before January 23.

#### **TRAPPING:**

**Central Zone - November 12 through January 22.**

**South Zone - October 29 through January 8.**

**Permit, Stamp and License Requirements** - Trapping license (if using traps or taking for commercial purposes) or hunting license (if using only guns and dogs, and taking for noncommercial purposes).

**Legal to Take** - Raccoon, opossum, armadillo, beaver, coyote, skunk and nutria. Bobcat and otter beginning December 1 until the end of the zonal season.

**Regulations Unique to Trapping** - In addition to these regulations, all General Wildlife Management Area Regulations shall apply. Only bows may be used in the Starvation Slough Hunt Area.

#### **SPRING TURKEY:**

**Central Zone - March 18 through April 23.**

**South Zone - March 4 through April 10.**

**Permit, Stamp and License Requirements** - Hunting license and wild turkey permit.

**Legal to Take** - Bearded turkey or gobbler.

**Regulations Unique to the Spring Turkey Season** - In addition to these regulations, all General Wildlife Management Regulations shall apply.

1. Possession of centerfire rifles is prohibited.
2. Only bows or muzzleloading guns may be used in the Starvation Slough Hunt Area.
3. Legal shooting hours are one-half hour before sunrise until 1 p.m.
4. The taking of any other animal is prohibited.

#### **MIGRATORY BIRDS:**

Rails, common moorhens, mourning doves, white-winged doves, snipe, ducks, coots, woodcock and crows may be hunted during seasons established by the Commission for these species.

**Permit, Stamp and License Requirements** - Hunting license, migratory bird permit, and state waterfowl permit and federal duck stamp (if hunting waterfowl).

**Legal to Take** - See Migratory Bird Hunting Regulations pamphlet.

**Regulations Unique to Migratory Birds** - In addition to these regulations, all General Wildlife Management Regulations shall apply.

1. The use of lead shot for taking ducks and coots is prohibited.

2. Centerfire shotguns are permitted during established area seasons when one or more migratory birds are legal to take, except when prohibited by specific area rule.
3. Crows may be taken during the first phase of crow season only.

#### **FISHING AND FROGGING:**

**Permitted year-round.**

**Permit, Stamp and License Requirements** - Fishing license (not required when frogging).

**Legal to Take** - See Florida Freshwater Fishing Regulations Summary.

**Regulations Unique to Fishing and Frogging** - All General Wildlife Management Area Regulations and General Freshwater Fishing Regulations shall apply.

1. Possession of guns is permitted only during periods when hunting is allowed.
2. Shooting frogs shall be permitted only during hunting season established for this area and only with guns that are legal to use during each particular open hunting season.

#### **GENERAL INFORMATION:**

1. Anyone born on or after June 1, 1975 must have passed a Commission-approved hunter-safety course prior to being issued a hunting license.
2. The Central Zone is that portion of the area north of State Road 70; and, the South Zone is that portion of the area South of State Road 70.
3. If you have any questions about this material, please call the Fish and Wildlife Conservation Commission at 863-648-3203 (TDD 800-955-8771).

#### **SOUTH FLORIDA WMD RULES AND INFORMATION:**

1. This land was acquired under the Save Our Rivers (SOR) Program. The purpose of SOR is to conserve and protect unique and irreplaceable lands, restore areas to their original condition as much as possible, and allow controlled multiple recreational and educational uses consistent with this purpose.

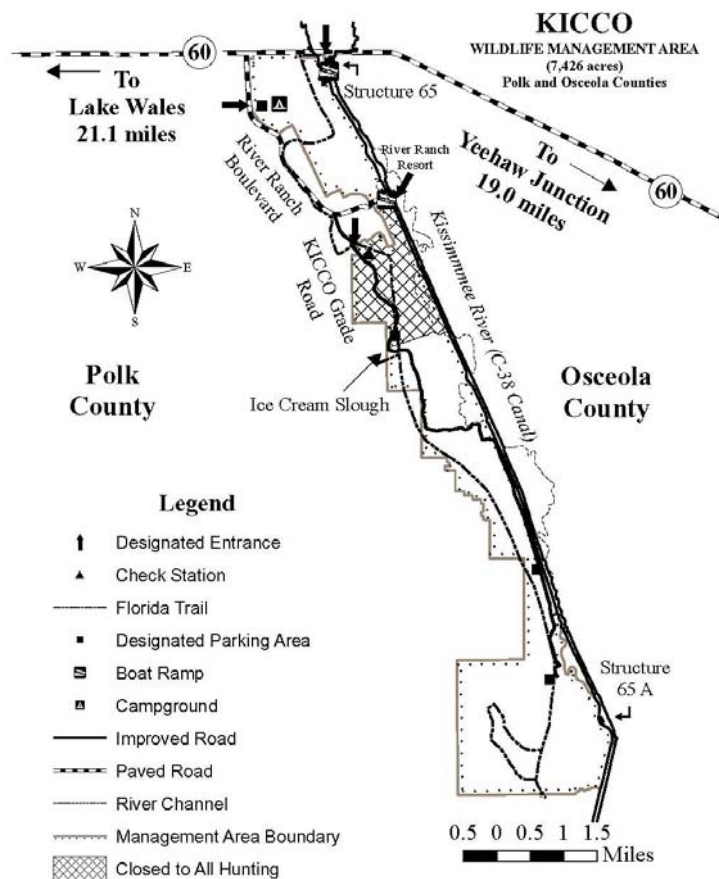
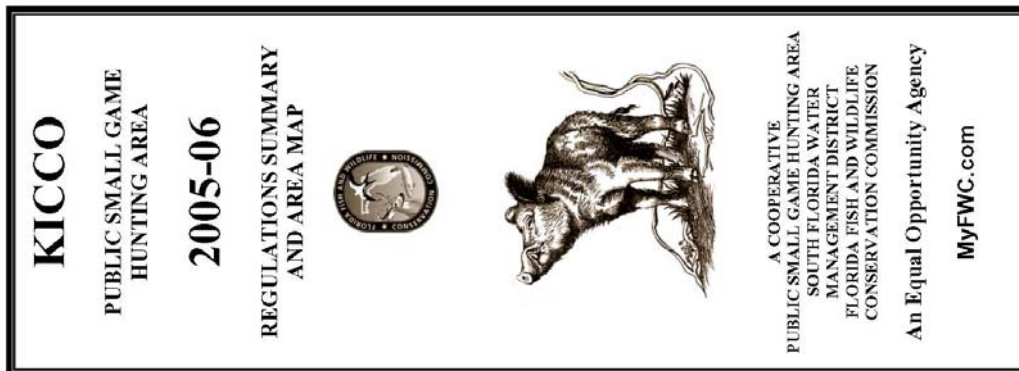
#### **COOPERATION REQUESTED:**

*If you see law violators or suspicious activities, contact your nearest Commission regional office or call 1-888-404-FWCC. You may qualify for a cash reward from the Wildlife Alert Reward Association.*

*Please do not discharge firearms at anything other than legal game while in a wildlife management area. Target practice and random discharge of firearms have become increasing threats to the quality of the hunting experience.*

*The U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, age, sex or handicap. If you believe that you have been discriminated against in any program, activity or facility as described above, or if you desire further information, please write to: The Office for Human Resources, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240. The project described in this publication is part of a program funded by federal dollars under the Wildlife Restoration Act. Federal funds pay \$2,357,686 or 20 percent of the cost of the program.*







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**PERMIT, STAMP AND LICENSE INFORMATION:**

Persons utilizing the public small game hunting area are required to have appropriate licenses, stamps and permits. Florida residents who are 65 years of age or older, and residents who have obtained a no-cost license through a certification of total and permanent disability by the Armed Forces or Veterans Administration or a certification of total disability by the Social Security Administration, may be exempt from most permit, stamp and license requirements on this area. Hunters under age 16 and Florida residents in the U.S. Armed Forces, not stationed in Florida and home on leave with orders in possession, are exempt from most permit, stamp and license requirements on this area.

Hunting and fishing licenses, and wildlife management area and state waterfowl permits may be purchased from county tax collectors, license agents, the Internet at [MyFWC.com/license](http://MyFWC.com/license) or by telephone at 1-888-486-8356.

Unless exempted, all hunters on this public small game area must have the following in their possession:

- Hunting License.
- Wildlife Management Area Permit.
- Daily Hog Management Permit (no exemptions).

**PERMIT INFORMATION:**

There are 30 daily hog management permits available; there are no exemptions. Hog management permits are available first-come, first-served at the KICCO check station each day of the season. Hog management permits are transferable.

**GENERAL REGULATIONS:**

In addition to the regulations that follow, all general laws and regulations relating to wild animal life shall apply, unless specifically exempted for this area.

- Hunters may enter the area no earlier than 1.5 hours before sunrise and shall exit the area no later than 1.5 hours after sunset, except for access to designated campsites.

- Hunters shall check in and out at a designated check station when entering or exiting the area and check all game taken.

- Driving a metal object into any tree, or hunting from a tree in which a metal object has been driven is prohibited.

- Public access is prohibited in portions of the public hunting area that are posted as "Closed", "Restricted" or "Closed to Public Access".

- Hunting or fishing is prohibited on any portion of the area posted as closed to hunting or fishing.

- The release of any animal is prohibited, without written authorization from the Executive Director.

**VEHICLES:**

- Only hunters with a valid daily hog management permit shall be permitted vehicular access to the area during the hog management hunts.

- Vehicles must be parked in a designated parking area or within 25 feet of a named or numbered road.

- The use of tracked vehicles, airboats, motorcycles or all-terrain vehicles is prohibited.

- Horses are prohibited except by written permission from the South Florida Water Management District, (800) 250-4200.

**GUNS OR DOGS:**

- Hunting with dogs is prohibited.

- For purposes other than hunting, dogs are allowed but must be kept under physical restraint at all times.

- The possession of guns other than shotguns, crossbow, longbows (including compound and recurve bows) and muzzleloading guns is prohibited.

**CAMPING:**

- Camping is permitted at designated campsites during periods when hunting is allowed or with written permission from the South Florida Water Management District, (800) 250-4200.

- Camps may be set up at the designated campsite after 8 a.m. one day prior to each hunt and must be removed by 6 p.m. one day following each hunt.

**OPEN SEASONS:**  
**Hog Management Hunts:** January 13-15, 20-22, 27-29 and February 3-5.

**Shooting Hours:** One-half hour before sunrise until one-half hour after sunset.

**Legal to Take:** Wild hog only.

**Bag and Possession Limits:** There is no size or bag limit for wild hog.

*All persons hunting during the hog management hunts are requested to wear blaze-orange headgear and/or vests.*

*This agency and the U.S. Department of the Interior prohibit discrimination by race, color, nationality, age, sex or handicap. If you believe you have been discriminated against in any program, activity or facility of this agency, write to: Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Tallahassee, FL 32399-1600; or to: Office of Human Relations, USFWS, Department of the Interior, Washington, D.C. 20240.*



When you spot law violators or suspicious activities, contact your nearest Commission regional office or call

**1-888-404-FWCC**

You may qualify for a cash reward from the Wildlife Alert Reward Association.

**Kissimmee River**

**PUBLIC SMALL GAME HUNTING AREA**

**2005-06**

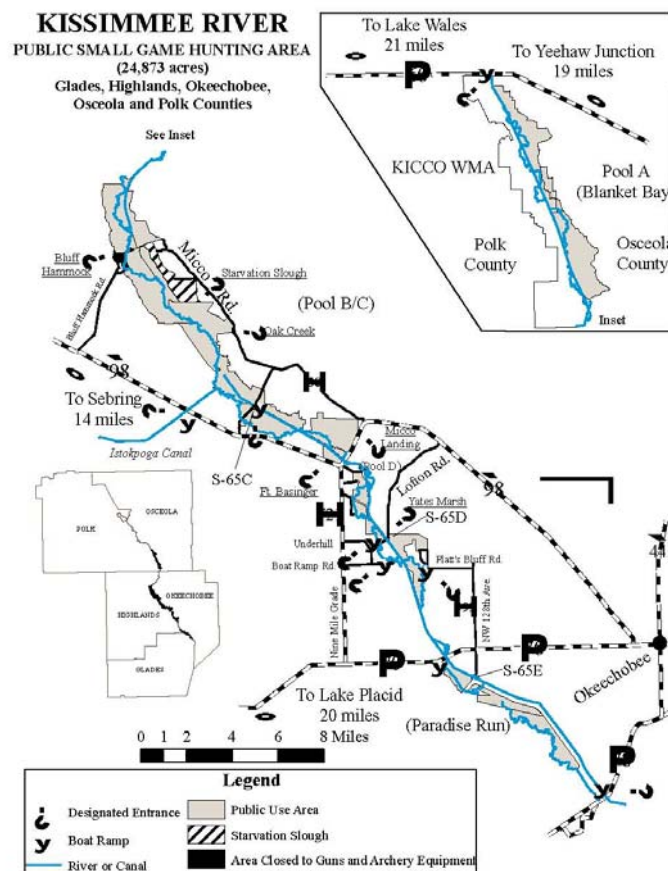
**REGULATIONS SUMMARY AND AREA MAP**




A COOPERATIVE  
 PUBLIC SMALL GAME HUNTING AREA  
 SOUTH FLORIDA WATER  
 MANAGEMENT DISTRICT  
 FLORIDA FISH AND WILDLIFE  
 CONSERVATION COMMISSION

**An Equal Opportunity Agency**

**MyFWC.com**



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**PERMIT, STAMP AND LICENSE INFORMATION:**

Persons utilizing the public small game hunting area are required to have appropriate licenses, stamps and permits. Florida residents who are 65 years of age or older, and residents who have obtained a no-cost license through a certification of total and permanent disability by the Armed Forces or Veterans Administration or a certification of total disability by the Social Security Administration, may be exempt from most permit, stamp and license requirements on this area. Hunters under age 16 and Florida residents in the U.S. Armed Forces, not stationed in Florida and home on leave with orders in possession, are exempt from most permit, stamp and license requirements on this area.

Hunting and fishing licenses, and wildlife management area and state waterfowl permits may be purchased from county tax collectors, license agents, the Internet at [MyFWC.com/license](http://MyFWC.com/license) or by telephone at 1-888-486-8356.

Unless exempted, all hunters on this public small game area must have the following in their possession:

- Hunting License.

**GENERAL REGULATIONS:**

In addition to the regulations that follow, all general laws and regulations relating to wild animal life shall apply, unless specifically exempted for this area.

- Hunting is prohibited within 300 yards of any active construction site.
- Driving a metal object into any tree, or hunting from a tree in which a metal object has been driven is prohibited.
- Public access is prohibited in portions of the public hunting area that are posted as "Closed", "Restricted" or "Closed to Public Access".
- Hunting or fishing is prohibited on any portion of the area posted as closed to hunting or fishing.
- The release of any animal is prohibited, without written authorization from the Executive Director.

**VEHICLES:**

- Access is authorized only from the Florida National Scenic Trail, the Kissimmee River, The

Istokopga Canal, the C-38 Canal, the C-41 Canal and at designated entry points.

- Vehicles may only be operated on designated roads.
- Parked vehicles may not obstruct a road, gate or firelane.
- No motor vehicle shall be operated on any part of any wildlife management area that has been designated as closed to vehicular traffic.

- The use of tracked vehicles, swamp buggies, all-terrain vehicles and other types of off-road vehicles is prohibited.

- The possession of horses is permitted only with a Special-Use License from the South Florida Water Management District, 800-250-4200.

- A marked footpath called the Florida Trail traverses the area. This trail is open to hikers throughout the year.

**GUNS OR DOGS:**

- The take of wild hog with guns other than muzzleloading guns and archery equipment is prohibited in the Starvation Slough area.

- Possession of centerfire rifles is prohibited.

- The possession of guns is prohibited outside of the Kissimmee River Channel, the C-38 Canal and the Istokopga Canal except from the beginning of rail season through the end of the spring turkey season.

- The possession of guns is prohibited in the northern portion of Bluff Hammock posted as closed to the possession of guns.

**CAMPING:**

- Camping is permitted by persons possessing a Special-Use License issued by the South Florida Water Management District, 800-250-4200.

**OPEN SEASON:**

**Hog Management Hunt:**  
Central Zone - January 23 through March 5.  
South Zone - January 9 through March 5.

Shooting Hours: One-half hour before sunrise until one-half hour after sunset.

Legal to Take: Wild hog only.

Bag and Possession Limits: There is no size or bag limit for wild hog.

**Note: This hunt is concurrent with the small game season for the Kissimmee River Public Use Area. Please refer to the regulations summary for information related to the harvest of small game.**

*All persons hunting during the hog management hunts are requested to wear blaze-orange headgear and/or vests.*

*This agency and the U.S. Department of the Interior, prohibit discrimination by race, color, nationality, age, sex or handicap. If you believe you have been discriminated against in any program, activity or facility of this agency, write to: Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Tallahassee, FL 32399-1600; or to: Office of Human Relations, USFWS, Department of the Interior, Washington, D.C. 20240.*



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## Appendix E. Species Lists

### Plant Species

X = Non-native    E = Endangered    T = Threatened

Common Name	Genus Species	Status
Red maple	Acer rubrum	
Leather fern	Acrostichum danaeifolium	
Ragweed	Ambrosia artemisifolia	
Giant ragweed	Ambrosia trifida	
Peppervine	Ampelopsis arborea	
Purple bluestem	Andropogon glomeratus	
Elliott's bluestem	Andropogon gyrans	
Broomsedge	Andropogon virginicus	
Carpetgrass	Anoxopus affinis	
Wiregrass	Aristida beyrichiana	
Tall threeawn	Aristida patula	
Swamp milkweed	Asclepias incarnata	
Lanceolata milkweed	Asclepias lanceolata	
Climbing aster	Aster carolinianus	
Elliott's aster	Aster elliotii	
Flat joint carpet grass	Axonopus compressus	
Common carpetgrass	Axonopus fissifolius	
Big carpet grass	Axonopus furcatus	
Carolina mosquito fern	Azolla caroliniana	
Salt bush	Baccharis halimifolia	
Carolina water hyssop	Bacopa caroliniana	
Beggarticks	Bidens alba	
Spanish needles	Bidens bipinnata	
Small-fruit beggarticks	Bidens mitis	
Swamp fern	Blechnum serrulatum	
Beautyberry	Callicarpa americana	
Hedge false bindweed	Calystegia sepium	
Heartseed	Cardiospermum microcardum	
Long's sedge	Carex albolutescens	
Nutgrass	Carex alta	
Clustered sedge	Carex glaucescens	
Nutsedge	Carex sp.	
Water hickory	Carya aquatica	
Cassia	Cassia nictans	

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Cassia	Cassia obtusifolia	
Asian coinleaf	Centella asiatica	
Buttonbush	Cephalanthus occidentalis	
Coontail	Ceratophyllum demersum	
Sensitive pea	Chamaecrista nictitans	
Chara	Chara sp.	
Mexican tea	Chenopodium ambrosioides	X
Fingergrass	Chloris neglecta	X
Thistle	Cirsium horridulum	
Thistle	Cirsium nuttallii	
Citrus	Citrus spp.	X
Sawgrass	Cladium jamaicensis	
Wrinkled Jointtailgrass	Coelorachis rugosa	
Wild taro	Colocasia esculenta	X
Spreading dayflower	Commelina diffusa	
Climbing dayflower	Commelina giga	X
Leavenworth's tickseed	Coreopsis leaven-worthii	
Tickseed	Coreopsis sp.	
Toothache grass	Ctenium aromaticum	
Columbia waxweed	Cuphea carthagenisis	
Bermudagrass	Cynodon dactylon	X
Jointed flat sedge	Cyperus articulatus	
Poorland flatsedge	Cyperus compressus	
Bladwin's flatsedge	Cyperus croceus	
Swamp flatsedge	Cyperus distinctus	
Yellow netgrass	Cyperus esculentus	X
Yellow flatsedge	Cyperus flavescens	
Sheathed flatsedge	Cyperus haspan	
Epiphytic flatsedge	Cyperus lanceolatus	X
Rusty flatsedge	Cyperus odoratus	
Many spike sedge	Cyperus polystachyos	
Retrose flatsedge	Cyperus retrorsus	
Strawcolored Flatsedge	Cyperus strigosus	
Narrow leaf tick trefoil	Desmodium paniculatum	
Tick trefoil	Desmodium sp.	
Dichanthelium	Dichanthelium sp.	
White-tops	Dichromena colorata	
White-bracted sedge	Dichromena latifolia	
Crabgrass	Digitaria sp.	
Virginia buttonweed	Diodia virginiana	
Persimmon	Diospyrus virginiana	
Sundew	Drosera sp.	
Barnyard grass	Echinochloa crusgalli	X

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Coast cockspur	Echinochloa walteria	
Water hyacinth	Eichhornia crassipes	X
Gulf coast spikerush	Eleocharis cellulosa	
Pale spikerush	Eleocharis flavescens	
Knotted spikerush	Eleocharis interstincta	
Smallfruit spikerush	Eleocharis microcarpa	
Viviparous spikerush	Eleocharis vivipara	
Tall elephant's foot	Elephantopus elatus	
Thalia lovegrass	Eragrostis atrovirens	X
Elliott's lovegrass	Eragrostis elliottii	
Purple lovegrass	Eragrostis spectabilis	
Fireweed	Erechtites hieracifolia	
Centipedegrass	Eremochloa ophiuroides	X
Baldwin's eryngo	Eryngium baldwinii	
Small dog fennel	Eupatorium capillifolium	
Thoroughwort	Eupatorium coelestinum	
Lateflowering thoroughwort	Eupatorium serotinum	
Slender goldenrod	Euthamia caroliniana	
Strangler fig	Ficus aurea	
Slender fimbry	Fimbristylis autumnalis	
Forked fimbry	Fimbristylis dichotoma	
Ditch fimbry	Fimbristylis schoenoides	
Carolina ash	Fraxinus caroliniana	
Dwarf umbrellasedge	Fuirena pumila	
Southern umbrellasedge	Fuirena scirpoidea	
Stiff marsh bedstraw	Galium tinctorium	
Carolina jessimine	Gelsemium sempervirens	
Waterspider orchid	Habenaria repens	
Clustered mille graine	Hedyotis uniflora	
Southeastern sunflower	Helianthus agrestis	
Swamp rosemallow	Hibiscus grandiflorus	
Common watergrass	Hydrichloa caroliniensis	
Hydrilla	Hydrilla verticillata	X
Watergrass	Hydrochloa mutillum	
Floating marshpennywort	Hydrocotyle ranunculoides	
Manyflowered marshpennywort	Hydrocotyle umbellata	
Sandweed	Hypericum fasciculateum	
St. Andrew's-cross	Hypericum hypericoides	
Dwart St. John's-wort	Hypericum mutillum	
Atlantic St. John's-wort	Hypericum reductum	
Fourpetal St. John's-wort	Hypericum tetrapetalum	
Bitter mint	Hyptis alata	
Dahoon holly	Ilex cassine	



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Gallberry	Ilex glabra	
Moon flower	Ipomoea alba	
Morning-glory	Ipomoea sp.	
Piedmont marshelder	Iva microcephala	
Soft rush	Juncus effusus	
Shore rush	Juncus marginatus	
Bighead rush	Juncus megacephalus	
Virginia mallow	Kosteletzkya virginica	
Short leaf flatsedge	Kyllinga brevifolia	
Fragrant flatsedge	Kyllinga sesquifolius	
Red root	Lachnanthes caroliniana	
Whitehead bogbutton	Lachnocalon anceps	
Southern bogbutton	Lachnocalon beyrichianum	
Lantana	Lantana camara	X
Cutgrass	Leersia hexandra	
Little duckweed	Lemna obscura	
Poor man's peppergrass	Lepidium virginicum	
Blazing star	Liatris sp.	
Frog's bit	Limnobium spongia	
Savanna false pimpernel	Lindernia grandiflora	
Anglestem primrosewillow	Ludwigia leptocarpa	
Mexican primrosewillow	Ludwigia octovaluis	
Peruvian primrosewillow	Ludwigia peruviana	X
Creeping primrosewillow	Ludwigia repens	
Shrubby primrosewillow	Ludwigia suffruticosa	
Southern watergrass	Luziola fluitans	
Climbing fern	Lygodium microphyllum	X
Japanese climbing-fern	Lygodium japonicum	X
Rusty lyonia	Lyonia ferruginea	
Staggerbush	Lyonia fruticosa	
Stagger bush	Lyonia lucida	
Sweetbay magnolia	Magnolia virginiana	
Creeping cucumber	Melothria pendula	
Baby tears	Micranthemum umbrosum	
Climbing hempweed	Mikania scandens	
Lax hornpod	Mitreola petiolata	
Wax myrtle	Myrica cerifera	
Parrot's feather	Myriophyllum aquaticum	X
Southern naiad	Najas guadalupensis	
Spatterdock	Nuphar advenum	
Yellow waterlily	Nymphaea mexicana	
White waterlily	Nymphaea odorata	
Royal fern	Osmunda regalis	

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Creeping wood sorrel	Oxalis corniculata	
Wood sorrel	Oxalis florida	
Sour paspalum	Palpalum conjugatum	
Panicgrass	Panicum augustifolium	
Fall panicgrass	Panicum dichotomiflorum	
Witchgrass	Panicum erectifolium	
Maidencane	Panicum hemitomom	
Gaping panicum	Panicum hians	
Egyptian paspalidium	Panicum paludivagum	X
Torpedo grass	Panicum repens	X
Virginia creeper	Parthenocissus quinquefolia	
Brook crowngrass	Paspalum acuminatum	
Sour paspalum	Paspalum conjugatum	
Knotgrass	Paspalum distichum	
Florida paspalum	Paspalum floridanum	
Field paspalum	Paspalum laeve	
Field paspalum	Paspalum laeve	
Bahai grass	Paspalum notatum	X
Hairyseed paspalum	Paspalum publiflorum	
Water paspalum	Paspalum repens	
Thin paspalum	Paspalum setaceum	
Vasey grass	Paspalum urvillei	
Green arrow arum	Peltandra virginica	
Red bay	Persea borbonia	
Silk bay	Persea borbonia humilis	
Common reed	Phragmites cordata	
Common frog-fruit	Phyla nodiflora	
Slash pine	Pinus elliotii	
Water lettuce	Pistia stratiodes	
Stinking camphorweed	Pluchea foetida	
Sweetscent	Pluchea odorata	
Stinkweed	Pluchea rosea	
Hairy smartweed	Polygonum hirsutum	
Swamp smartweed	Polygonum hydropiperoides	
Dotted smartweed	Polygonum punctatum	
Resurrection fern	Polypodium polypidiodes	
Rustweed	Polypremum procumbens	
Pickeralweed	Pontedaria cordata	
Mermaid weed	Proserpinaca palustris	
Chapman oak	Quercus chapmanii	
Sand live oak	Quercus germinata	
Mrytle oak	Quercus myrtifolia	
Water oak	Quercus nigra	

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Live oak	<i>Quercus virginiana</i>	
Myrsine	<i>Rapanea punctata</i>	
Pale meadowbeauty	<i>Rhexia mariana</i>	
Maid marian	<i>Rhexia nashii</i>	
Clustered beakrush	<i>Rhynchospora cephalantha</i>	
Spreading beaksedge	<i>Rhynchospora divergens</i>	
Florida Breaksedge	<i>Rhynchospora eximia</i>	
Fasciculate beakrush	<i>Rhynchospora fascicularis</i>	
Globe beakrush	<i>Rhynchospora globularis</i>	
Gray's beakrush	<i>Rhynchospora grayi</i>	
Horned beakrush	<i>Rhynchospora inundata</i>	
Southern beakrush	<i>Rhynchospora microcarpa</i>	
Capitate beakrush	<i>Rhynchospora microcephala</i>	
Tracy's beackrush	<i>Rhynchospora tracyi</i>	
Sand blackberry	<i>Rubus cuniefolius</i>	
Ruella	<i>Ruella</i> sp.	
Longbeak beaksedge	<i>Rhynchospora scirpoides</i>	
Baldrush	<i>Rhynchospora nitans</i>	
Cabbage palm	<i>Sabal palmetto</i>	
Bartram's rosegentian	<i>Sabatia bartramii</i>	
Sugarcane plumegrass	<i>Saccharum giganteum</i>	
India cupscale	<i>Sacciolepis indica</i>	X
American cupscale	<i>Sacciolepis striata</i>	
Bull-tounge arrowhead	<i>Sagittaria lancifolia</i>	
Broad-leaf arrowhead	<i>Sagittaria latifolia</i>	
Coastal-plain willow	<i>Salix caroliniana</i>	
Common salvinia	<i>Salvinia minima</i>	
Elderberry	<i>Sambucus canadensis</i>	
Whitevine	<i>Sarcostemma clausa</i>	
Lizard's tail	<i>Saururus cernuus</i>	
Brazilian pepper	<i>Schinus terebinthifolius</i>	X
Giant bulrush	<i>Scirpus californicus</i>	
Cuban bulrush	<i>Scirpus cubensis</i>	X
Softstem bulrush	<i>Scirpus tabernaemontani</i>	
Netted nutrush	<i>Scleria reticularis</i>	
Saw palmetto	<i>Serenoa repens</i>	
Danglepod	<i>Sesbania herbacea</i>	
Purple rattle bush	<i>Sesbania punicea</i>	X
Bladderpod	<i>Sesbania vesicaria</i>	
Giant bristlegrass	<i>Setaria magna</i>	
Yellow bristlegrass	<i>Setaria parviflora</i>	
Knotroot bristle grass	<i>Seteria geniculata</i>	
Broomweed	<i>Sida acuta</i>	

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Indian hemp	<i>Sida rhombifolia</i>	
Narrowleaf blueeyed grass	<i>Sisyrinchium angustifolium</i>	
Common greenbriar	<i>Smilax</i> sp.	
Soda-apple	<i>Solanum capsicoides</i>	
Tropical soda-apple	<i>Solanum viarum</i>	X
Pinebarren Goldenrod	<i>Solidago fistulosa</i>	
Twistedleaf goldenrod	<i>Solidago tortifolia</i>	
Lopsided indiagrass	<i>Sorghastrum secundum</i>	
Chicken-spike	<i>Sphenoclea zeylanica</i>	X
Smutgrass	<i>Sporobolus indicus</i>	X
Corkwood	<i>Stillingia aquatica</i>	
Bay cedar	<i>Suriana maritima</i>	
Poison ivy	<i>Toxicodendron radicans</i>	
Bald cypress	<i>Taxodium distichum</i>	
Wood sage	<i>Teucrium canadense</i>	
Wildenows maiden fern	<i>Thelypteris interrupta</i>	
Southern shield fern	<i>Thelypteris kunthii</i>	
Wax dot maiden fern	<i>Thelypteris kunthii</i>	
Marsh fern	<i>Thelypteris palustris</i>	
Wild pine	<i>Tillandsia balbisima</i>	
Airplant	<i>Tillandsia</i> sp.	T
Marsh St. John's wort	<i>Triadenum virginicum</i>	
Southern cattail	<i>Typha domingensis</i>	
Broad leaf cattail	<i>Typha latifolia</i>	
Cesar weed	<i>Urena lobata</i>	X
Paragrass	<i>Urochloa mutica</i>	X
Leafy Bladderwort	<i>Utricularia foliosa</i>	
Bladderwort	<i>Utricularia</i> sp.	
Highbush blueberry	<i>Vaccinium corymbosum</i>	
Shiny blueberry	<i>Vaccinium myrsinites</i>	
Tapegrass	<i>Vallisneria americana</i>	
Harsh vervain	<i>Verbena scabra</i>	
Fourleaf vetch	<i>Vicia acutifolia</i>	
Wild grape	<i>Vitis munsoniana</i>	
Netted chain fern	<i>Woodwardia areolata</i>	
Virginia chain fern	<i>Woodwardia virginica</i>	
Elliott's yellow-eyed grass	<i>Xyris elliotii</i>	
Fringed yellow-eyed grass	<i>Xyris fimbriata</i>	
Richard's yellow-eyed grass	<i>Xyris jupicae</i>	
Yellow-eyed grass	<i>Xyris</i> sp.	

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## Bird Species

Data source: FFWCC and LSP Resource Evaluation Program

		PRESEN CE	STATUS	
	E=Endangered T=Threatened S=Species of Special Concern N=Non-native  p = Potential u = Confirmed		Federal	State
Common Name	Scientific Name			
Acadian Flycatcher	Empidonax virescens	p		
American Bittern	Botaurus lentiginosus	c		
American Crow	Corvus brachyrhynchos	c		
American Goldfinch	Carduelis tristis	p		
American Kestrel	Falco sparverius	c		
American Redstart	Setophaga ruticilla	c		
American Robin	Turdus migratorius	c		
American Wigeon	Gavia immer	p		
American Woodcock	Scolopax minor	c		
Anhinga	Podilymbus podiceps	c		
Bachman's Sparrow	Aimophila aestivalis	p		
Bald Eagle	Haliaeetus leucocephalus	c	E	T
Bank Swallow	Riparia riparia	p		
Barn Owl	Tyto alba	c		
Barn Swallow	Hirundo rustica	c		
Barred Owl	Strix varia	c		
Belted Kingfisher	Ceryle alcyon	c		
Black-and-white Warbler	Mniotilta varia	p		
Black-billed Cuckoo	Coccyzus erythrophthalmus	p		
Black-shouldered Kite	Pelecanus occidentalis	p		
Black-whiskered Vireo	Vireo altiloquus	p		
Black Duck	Pelecanus erythrorhynchos	p		
Black Rail	Laterallus jamaicensis	p		
Black Vulture	Phalacrocorax auritus	c		
Blackpoll Warbler	Dendroica striata	p		
Blk-crowned Night-heron	Nycticorax nycticorax	c		
Blk-throated Blue Warbler	Dendroica caerulescens	c		
Blk-throated Green Warbler	Dendroica virens	p		

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Blue Jay	Cyanocitta cristata	c		
Blue-gray Gnatcatcher	Polioptila caerulea	c		
American Anhinga	Anhinga anhinga	c		
Blue Grosbeak	Guiraca caerulea	p		
Boat-tailed Grackle	Quiscalus major	c		
Bobolink	Dolichonyx oryzivorus	c		
Bobwhite Quail	Colinus virginianus	c		
Brewer's Blackbird	Euphagus cyanocephalus	c		
Brown-headed Cowbird	Molothrus ater	c	X	X
Brown Pelican	Anas platyrhynchos	p		
Brown Thrasher	Toxostoma rufum	c		
Burrowing Owl	Athene curicularia	c		S
Canvasback	Anas rubripes	p		
Carolina Wren	Troglodytes ludovicianus	c		
Cattle Egret	Bubulcus ibis	c	X	X
Cliff Swallow	Hirundo pyrrhonota	p		
Common Flicker	Colaptes auratus	p		
Common Grackle	Quiscalus quiscula	c		
Common Ground Dove	Columbina passerina	c		
Common Loon	Anas fulvigula	p		
Common Snipe	Gallinago gallinago	c		
Common Yellowthroat	Geothlypis trichas	c		
Common Tern	Sterna hirundo	p		
Connecticut Warbler	Oporonis agilis	p		
Cooper's Hawk	Anas acuta	p		
Crested caracara	Caracara cheriway	c		
Eastern Screech-owl	Otus asio	c		
Eastern Wood-pewee	Contopus virens	p		
European Starling	Sturnus vulgaris	c	X	X
Fish Crow	Corvus ossifragus	p		
Glossy Ibis	Plegadis falcinellus	p		
Grasshopper Sparrow	Ammodramus savannarum	p	E	E
Great Egret	Casmerodius albus	c		
Great Horned Owl	Bubo virginianus	c		
Great White Heron	Ardrea herodias	p		
Greater Yellowlegs	Tringa melamoleuca	p		
Green-winged Teal	Anas crecca	c		
Green Backed Heron	Butorides striatus	c		
Hairy Woodpecker	Picoides villosus	p		
Henslow's Sparrow	Ammodramus henslowii	p		
Hooded Warbler	Wilsonia citrina	p		
House Sparrow	Passer domesticus	c	X	X



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House Wren	Troglodytes aedon	p		
Indigo Bunting	Passerina cyanea	c		
Kentucky Warbler	Oporonis formosus	p		
Killdeer	Charadrius vociferus	c		
King Rail	Rallus elegans	p		
Le Conte's Sparrow	Ammodramus leconteii	p		
Least Bittern	Ixobrychus exilis	c		
Loggerhead Shrike	Lanius judovicianus	c		
Marsh Wren	Cistothorus palustris	c		
Merlin	Falco columbarius	c		
Mottled Duck	Dendrocygna bicolor	c		
Mourning Dove	Zenaida macroura	c		
N. Rough-winged Swallow	Stelgidopteryx serripennis	p		
Northern Bobwhite Quail	Colinus virginianus	c		
Northern Cardinal	Cardinalis cardinalis	c		
Northern Harrier	Aythya valisineria	p		
Northern Mockingbird	Mimus polyglottos	c		
Northern Oriole	Icterus galbula	p		
Northern Parula Warbler	Parula americana	p		
Northern Pintail	Aythya collaris	p		
Painted Bunting	Passerina ciris	c		
Palm Warbler	Dendroica palmarum	c		
Peregrine Falcon	Falco peregrinus	c	T	
Pied-billed Grebe	Mergus serrator	p		
Pileated Woodpecker	Dryocopus pileatus	c		
Pine Warbler	Dendroica pinus	c		
Prairie Warbler	Dendroica discolor	c		
Prothonotary Warbler	Protonotaria citrea	p		
Purple Martin	Progne subis	p		
Redwing Blackbird	Agelaius phoeniceus	c		
Ruby-throated Hummingbird	Archilochus colubris	p		
Rufous-sided Towhee	Pipilo erythrophthalmus	p		
Sandhill Crane	Grus canadensis	c		S
Scissor-tailed Flycatcher	Tyrannus forficatus	p		
Scrub Jay	Aphelocoma coerulescens	p	T	T
S.E American Kestrel	Falco sparverius paulus	c	T	T
Sedge Wren	Cistothorus platensis	p		
Sharp-shinned Hawk	Elanus caeruleus	c		
Sharp-tailed Sparrow	Ammodramus caudacutus	p		

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Short-eared Owl	Asio flammeus	p		
Smooth-billed Ani	Crotophaga ani	p		
Swallow-tailed Kite	Elanoides forficatus	c		
Snowy Egret	Egetta thula	c		S
Solitary Sandpiper	Tringa solitaria	p		
Solitary Vireo	Vireo solitarius	p		
Song Sparrow	Melospiza melodia	p		
Tree Swallow	Tachycineta bicolor	c		
Tricolored Heron	Egretta tricolor	c		
Turkey Vulture	Accipiter cooperii	c		
Virginia Rail	Rallus limicola	p		
Water Pipit	Anthus spinoletta	p		
White-eyed Vireo	Vireo griseus	c		
White-throated Sparrow	Zonotrichia albicollis	p		
White-winged Dove	Zenaida asiatica	p		
White Ibis	Eodcimus albus	c		
White Pelican	Accipiter striatus	p		
Whip-poor-will	Caprimulgus vociferus	c		
Woodstork	Mycteria americana	c	E	E
Yel-crowned Night-heron	Nycticorax violaceus	c		
Yellow-bellied Sapsucker	Sphyrapicus varius	p		
Yellow-billed Cuckoo	Coccyzus americanus	c		
Yellow-rumped Warbler	Dendroica coronata	c		
Yellow-throated Vireo	Vireo flavifrons	p		
Yellow-throated Warbler	Dendroica dominica	c		

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## Mammal Species

Data Source: FFWCC and LSP Resource Evaluation Program

		PRESENCE	STATUS	
	E=Endangered T=Threatened S=Species of Special concern N=Non-native  a = Potential u = Confirmed		Federal	State
Common Name	Scientific			
Armadillo	<i>Dasypus novemcinctus</i>	c	N	N
Big Brown Bat	<i>Eptesicus fuscus fuscus</i>	c		
Big Cypress Fox Squirrel	<i>Sciurus niger avicennia</i>	p		T
Bobcat	<i>Lynx rufus</i>	c		
Brazilian Free-tailed Bat	<i>Tadarida b. cynocephala</i>	p		
Cotton Mouse	<i>Peromyscus gossypinus</i>	c		
Coyote	<i>Canis latrans</i>	p		
Eastern Cottontail	<i>Sylvilagus floridanus</i>	c		
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	c		
Eastern Mole	<i>Scalopus aquaticus</i>	c		
Eastern Pipistrel	<i>Pipistrellus subflavus</i>	p		
Eastern Woodrat	<i>Neotoma floridana</i>	c		
Evening Bat	<i>Nycticeius humeralis</i>	p		
Feral Hog	<i>Sus scrofa</i>	c	N	N
Florida Black Bear	<i>Ursus americanus floridanus</i>	p		T
Florida Manatee	<i>Trichechidae manatus</i>	p	E	E
Florida Mastiff Bat	<i>Eumops glaucinus floridanus</i>	p		E
Florida Mouse	<i>Podomys floridanus</i>	p		S
Florida Panther	<i>Felis concolor caryl</i>	p	E	E
Florida Water Rat	<i>Neofiber alleni</i>	c		
Florida Weasel	<i>Mustela frenata peninsulae</i>	p		
Gray Fox	<i>Urocyon cinereoargenteus</i>	c		
Hispid Cotton Rat	<i>Sigmodon hisipus</i>	c		
Hoary Bat	<i>Lasiurus cinereus</i>	p		
Leaset Shrew	<i>Cryptotis parva</i>	c		
Long-tailed Weasel	<i>Mustela frenata</i>	p		
Marsh Rabbit	<i>Sylvilagus palustris</i>	c		
Northern Yellow Bat	<i>Lasiurus i. floridanus</i>	p		
Opposum	<i>Didelphis marsupialis</i>	c		
Raccoon	<i>Procyon lotor</i>	c		

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Red Fox	<i>Vulpes fulva</i>	p		
Rice Rat	<i>Oryzomys palustris</i>	c		
River Otter	<i>Lutra canadensis</i>	c		
Seminole Bat	<i>Lasiurus seminolus</i>	p		
Sherman's Fox Squirrel	<i>Sciurus niger shermani</i>	c		S
Shermans Shorttailed Shrew	<i>Blarina carolinensis shermani</i>	p		S
Short-tailed Shrew	<i>Blarina c. carolinensis</i>	c		
Southeastern Big-eared Bat	<i>Plecotus rafinesquii</i>	p		
Southeastern Brown Bat	<i>Myotis austroriparius</i>	p		
Southeastern Pocket Gopher	<i>Geomys pinetis</i>	p		
Southern Florida Mink	<i>Mustela vison evergladensis</i>	p		T
Southern Flying Squirrel	<i>Glaucomys volans</i>	p		
Spotted Skunk	<i>Spilogale putorius</i>	p		
Striped Skunk	<i>Mephitis mephitis</i>	p		
Whitetail Deer	<i>Odocoileus virginianus</i>	c		

### Reptile and Amphibian Species

		PRESENCE	STATUS		
	E=Endangered T=Threatened S=Species of Special concern N=Non-native  a = Potential u = Confirmed		Federal		State
Common Name	Scientific Name				
<b>SNAKES</b>					
Brown Watersnake	Nerodia taxispilota	p			
Common Kingsnake	Lampropeltis getulus	c			
Corn/Red Rat	Elaphe guttata guttata	c			
Dusty Pygmy	Sistrurus miliarius barbouri	p			
Eastern Coachwhip	Masticophis flagellum flagellum	p			
Eastern Coral	Micrurus fulvius fulvius	p			
Eastern Diamondback	Crotalus adamanteus	c			
Eastern Hognose	Heterodon platyrhinos	p			
Eastern Indigo	Drymarchon corais couperi	c	T		T
Eastern Mud	Farancia abacura abacura	p			
Everglades Racer	Coluber constrictor paluticola	p			
Everglades Rat	Elaphe obsoleta rossalleni	p			
Fl. Green Watersnake	Nerodia cyclopion floridana	p			
Florida Brown Snake	Storeria dekayi victa	p			
Florida Cottonmouth	Agkistrodon piscivorus conanti	c			
Florida Pine	Pituophis melanoleucus mugitus	p			S
Florida Scarlet	Cemophora coccinea coccinea	p			
Florida Watersnake	Nerodia fasciata pictiventris	p			
Glossy Crayfish	Regina rigida rigida	p			
Mole Kingsnake	Lampropeltis calligaster rhombomaculata	p			
Peninsula Ribbon	Thamnophis sauritus sackeni	c			
Peninsula Crowned Snake	Tantilla relicta relicta	p			
Pinewoods	Rhadinaea flavilata	p			
Rough Green	Opheodrys aestivus	p			
Scarlet Kingsnake	Lampropeltis triangulum elapsoides	p			
Short-tailed Snake	Stilosoma extenuatum	p			
So Florida Rainbow	Farancia erythrogramma seminola	p			
Southern Black Racer	Coluber constrictor priapus	c			

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Southern Copperhead	Agkistrodon contortrix contortrix	p		
Yellow Rat/Chicken	Elaphe obsoleta quadrivittata	c		
<b>AMPHIBIANS</b>		p		
Barking Treefrog	Hyla gratiosa	p		
Bluetailed Mole Skink	Eumeces egregius lividus	p	T	T
Broadheaded Skink	Eumeces laticeps	p		
Brown Anole	Anolis sagrei sagrei	c	N	N
Bullfrog	Rana catesbeiana	p		
Central Newt	Notophthalmas viridescens louisianensis	p		
Cuban Treefrog	Osteopilus septentrionalis	c	N	N
Dwarf Salamander	Eurycea quadridigitata	p		
Eastern Glass Lizard	Ophisaurus ventralis	p		
Eastern Lesser Siren	Siren intermedia intermedia	p		
Eastern Narrowmouthed Toad	Gastrophryne carolinensis carolinensis	c		
Eastern Spadefoot	Scaphiopus holbrooki	p		
Everglades Dwarf Siren	Pseudobranchus striatus belli	p		
Florida Chorus Frog	Pseudacris nigrita verrucosa	c		
Florida Cricket Frog	Acris gryllus dorsalis	c		
Florida Gopher Frog	Rana areolata aesopus	p		S
Green Anole	Anolis carolinensis	p		
Green Treefrog	Hyla cinerea	c		
Ground Skink	Scincella lateralis	p		
Little Grass Frog	Limaoedus ocularis	p		
Narrow-striped Dwarf Siren	Pseudobranchus striatus axanthus	p		
Oak Toad	Bufo quercicus	c		
Southeastern Five-lined Skink	Eumeces inexpectatus	c		
Southern Fence Lizard	Sceloporus undulatus undulatus	p		
Southern Leopard Frog	Rana sphenoccephala	c		
Southern Toad	Bufo terrestris	p		
Squirrel Treefrog	Hyla squirella	p		
Striped Newt	Notophthalmas perstriatus	p		
Two-toed Amphiuma Congo Eel	Amphiuma means	p		
<b>TURTLES</b>		p		
Common Musk	Sternotherus odoratus	p		
Florida Box	Terrapene carolina bauri	c		
Florida Chicken	Deirochelys reticularia chrysea	p		
Florida Mud	Kinosternon subrubrum	p		



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Florida Redbelly	Pseudemys nelsoni	c		
Florida Snapping	Chelydra serpentina osceola	c		
Florida Softshell	Apalone ferox	c		
Gopher Tortoise	Gopherus polyphemus	c		S
Peninsula Cooter	Pseudemys floridana peninsularis	p		
Striped Mud	Kinosternon baurii	c		
<b>CROCODYLIA</b>		p		
American Alligator	Alligator mississippiensis	c	T	S